A WORKING GUIDE FOR PLANNING AND DESIGNING SAFER URBAN ENVIRONMENTS

Produced by the

Safe City Committee of the City of Toronto

and the

City of Toronto
Planning and Development Department

Written by

Planning and Development Department Staff

and

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Faculty of Environmental Studies, York University

October 1992

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Robert E. Millward
Commissioner

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1 INTRODUCTION

The Purpose of This Guide: What It Is and Is Not

This guide is intended to aid Toronto-area planning and design professionals to integrate personal safety in their work. It will also be of interest to planners in other cities, architects, developers, community groups, and students. It is intended very much as a "hands-on" document, with pages that can be photocopied. A format for adding new information based on design and planning practice is provided at the end of the guide. It is intended to be viewed critically, and to be modified as needed in later editions.

This guide is **not** intended to be the final statement on Crime Prevention Through Environmental Design in Toronto. It is not intended to suggest that bad planning and design cause criminal acts, or that modifying urban environments will singlehandedly prevent crime. It is not intended to create a body of "experts" on crime prevention, who know what is best for a neighbourhood. It is not intended to be yet another level of bureaucracy aimed at stopping innovative developments.

This guide is a tool to help build safer cities.

The Problem: Fear of Crime

Toronto is a relatively safe place to live. Yet many people who live in Toronto feel afraid to use public spaces and public amenities. They fear for their personal safety on streets and transit systems, in parks and parking garages. The majority of these frightened people are women.

Fear of crime affects individuals' behaviour. People may avoid taking a night course, may refuse a job that involves working late or in an unsafe neighbourhood, may take a taxi or their car instead of public transportation, may shun recreational activities such as jogging or seeing a movie alone, may not allow their children to play outdoors. According to the most thorough study of the causes and effects of fear of crime[1], women are more likely to use these "avoidance strategies" that keep them away from problematic places and situations, while men are more likely to use "active strategies", such as taking a self-defense course.

Fear of crime also has effects on neighbourhoods and on the city as a whole. Studies in the United States and in Britain point to the economic decay of downtown areas as a direct result of fear of crime.[2] In Toronto, social housing projects, commercial establishments, even neighbourhood parks, have been blocked by community groups concerned that these developments would supposedly increase crime. In the long term, fear of crime destroys the most important element necessary for a successful city, the assumption that strangers on the street are potential allies rather than attackers.

Fear of Crime and Gender

Women are far more likely than men to fear crime, and to restrict their own and their children's activities because of fear of crime. According to the most recent Canadian Urban Victimization Survey, 56% of women are "afraid" or "very afraid" walking alone in their neighbourhood at night, compared with 18% of men.[3] Women with fewer economic choices, who are elderly or disabled, or who live alone, are more likely to fear crime.

In part, the gender difference reflects urban realities and the risks that urban women confront in their daily lives. According to police statistics, personal violent crime by strangers accounts for approximately one half of all crime committed in urban areas, and one fifth to one half of all rapes occur in urban public spaces.[4] These statistics disregard the substantial underreporting of sexual assaults, often estimated as ten times the number reported to the police.[5] Sexual assault, the crime most often feared by women, is also a far more terrifying crime to contemplate than robbery, which is the crime most often feared by men.[6] It is for this reason that a number of cities, including London, Amsterdam, and Toronto, have focussed on making public spaces safer through concentrating on violence against women.

Public Violence, Fear of Crime, and Planning

In recent years, a growing consensus has emerged on the relationship between public violence, fear of crime and the urban built environment. This is labelled the Safe Cities or Safe Communities approach. The first tenet of the consensus is that concentrating on where people fear crime and improving these places does seem to make sense. Studies in Toronto and Seattle on sites of public sexual assaults show that certain kinds of places – parking garages and lots, for instance – and certain kinds of elements – poor lighting and hiding places – that are feared correlate with where crimes take place.[7] Also, people are often aware of where crimes have taken place in their neighbourhoods, including crimes not reported to the police or mentioned in the newspaper. In short, treating people as "experts" in the problems of their community and how they can be fixed generates new information and solutions.

New approaches to urban safety include both planning and community development improvements. Rather than bad planning being posited as a cause of crime[8], or good solutions being limited to "keeping out" criminal elements through design[9], the Safe Cities approach stresses management and community crime prevention along with design amelioration. "Bad" planning is seen to provide opportunities for crime, and "good" planning is seen to reduce opportunities for crime and to provide opportunities for the potential victim to escape.

The third tenet stresses concentrating on the needs of those who are most vulnerable, not only women, but older people, people with disabilities, and lower income people. Without the views of those who are most affected by fear of crime, an untrue picture of the problem will be obtained. Without the expertise of those who must use potential crime sites on a daily basis, the planning process is incomplete.

The Toronto Example

Toronto has been one of the leading cities in the emergence of the Safe Cities approach to crime prevention. The collaborative efforts of the Toronto Transit Commission, the Metropolitan Toronto Police Force, and the Metro Action Committee on Public Violence against Women and Children (METRAC), which resulted in a report on making the subway system and the surface transit system safer for women[10] has influenced work in Australia's state transit system. The *Women's Safety Audit Guide*, a checklist of factors to evaluate a specific setting, developed by METRAC as the result of public transit work has proven enormously successful with community groups around the world.

The City of Toronto's work through the Safe City Committee has also been requested throughout Europe, North America, and Australia. Cities such as St. Paul (U.S.A.), Winnipeg (Canada), and Perth (Australia) have modelled Safe City initatiatives after Toronto's example. *Green Spaces/Safer Places*, a report on making parks safer, drew participants from over 20 Canadian cities, and has galvanized planners, architects, and community organizations across the world, including leading to a special issue of the Canadian journal for landscape architects, *Landscape Architectural Review*.

The Safe City Report: Municipal Strategies for Preventing Public Violence Against Women was adopted by Toronto City Council in 1988. Among its thirty-seven recommendations were several directed at the Planning and Development Department, including the "training of all planning staff to take security considerations into account in their regular consultations with the public, with particular effort directed at getting input from women"; that "a policy on public safety be incorporated into Toronto's Official Plan and that this policy be elaborated on in Part Two Plans and included in the Quinquennial Review"; and that a "comprehensive safe design guidelines" be created.

Training workshops were attended by the majority of planners from April through July 1990. A policy on public safety was included in Cityplan, and Part Two Plans have already begun to incorporate safety concerns. This working guide is intended to fulfill the recommendation that "comprehensive safe design guidelines" be developed.

The Basis of These Guidelines

These guidelines have three sources: research documenting people's views on what elements make them feel safer or less safe; micro-environmental studies of where public assaults have taken place and the way offenders use public space; and research on participatory design.

In Toronto, several community-based initiatives have focused on women's fear of crime in public spaces and have identified the environmental characteristics of urban spaces that make women feel unsafe. The *Women in Safe Environments (WISE) Report*[11], completed by METRAC, Women Plan Toronto, and the York University Faculty of Environmental Studies identified the following design factors that women find unsafe:

- poor lighting
- isolation
- lack of sightlines ("not visible to others")
- no access to help
- hiding and entrapment spots (including "trees and bushes")
- inadequate security

METRAC's *Women's Safety Audit Guide* used the design factors listed above as well as: maintenance, surrounding land use (i.e. as it affected isolation and sightlines), and "movement predictors", the ability for an assailant to predict where a victim will be in a short period of time. These reports reinforced the message of urbanists such as Jane Jacobs, writing from the humanist point of view, and Dolores Hayden, writing from the feminist point of view, on public safety: that the post-war planning trends of large scale development and separation of land use are inimical to the goals of informal surveillance and neighbourhood-building.[12]

Two small scale studies have examined actual sexual assault sites to determine contributing environmental factors: Francis Stoks' study of 65 public sexual assault sites in Seattle[13] and the Metro Toronto Task Force on Public Violence against Women and Children's survey of 29 public sexual assault sites in Toronto.[14] Both studies stressed the importance of eliminating entrapment spots whenever possible, and especially along necessary routes, such as those between a transit stop and residences. The Toronto study suggested that land-use separation was a possible factor in several of these assaults, for instance, an assault in a shopping centre parking lot occurred when a woman used it as a short-cut between a bus stop on an arterial road and a high-rise apartment building on an inner road.

These studies stress that public sexual assaults often follow a "moving crime" pattern, with an initial encounter in one place, followed by an assault in another.[15] There is a period of "targeting" during which time the victim will be surreptitiously or obviously watched or followed by the attacker. The victim may not realize that this is occurring, due to poor lighting, inadequate sightlines, or the presence of a "movement predictor" (e.g. the attacker at the end of a tunnel that has only one exit). The victim may also realize that she is being watched or followed, but has no access to help because she is in an isolated area, there is no way to summon help, or there is a way to summon help but it is not adequately signed. Design responses can be devised for these scenarios, but not necessarily for the third option: that she may see other people, and other people may see her, but she may feel unable to call for help, or people may not want to "become involved". Design improvements cannot obviate the necessity of women knowing self-defense, and men and women being willing to intervene in a dangerous or humiliating situation.

The United Kingdom has been the source of some evaluations of more traditional crime prevention through environmental design work.[16] One of the reasons that design improvements to low-income public housing were often opposed by the tenants is that they were not adequately consulted, and that improvements to management and to the public structure were not considered alongside design. The "Safer Communities" projects in Britain are based on the perceptions and suggestions of residents, and do provide much more of a sense of ownership to those affected by fear of crime.

2 THE PROCESS FOR PLANNING & DESIGNING SAFER URBAN ENVIRONMENTS

Introduction

Implementing planning guidelines for safer cities involves three steps:

1. an awareness by planners of the issues and an acknowledgment that they have a positive role to play in mitigating crime in public environments;
2. using these guidelines in their day to day planning practice;
3. engaging in a process of mutual learning with the community to add to and modify these guidelines.

Most planners already recognize the importance of considering safety when reviewing plans. A number of cities have developed "do" and "don't" guidelines for use by planners and developers. What has been missing is a process, from the developer's first rough draft to the final evaluation, for including these concerns.

Obviously, this process will vary enormously, depending on whether it is a new building or a redevelopment with existing residents or users, a single small site or a neighbourhood, an amendment to the Zoning By-Law or a Secondary Plan. The process will also vary, depending on the controversy surrounding the project. Ideally, the relationship between planner, architect, developer, consultant, neighbouring owners or residents, politicians, and the larger community is harmonious. The reality is that the planner is often forced to mediate between seemingly irreconcilable differences, some of them focussed on fear of crime.

In a potentially complicated application, the best thing a planner can do is to deal with safety concerns early, clearly, and thoroughly.

The Metropolitan Toronto Police Force is an ally not often thought of when there are concerns about safety and environments. But the expertise and resources of the police should not be underestimated. Developing a rapport with the community liaison officer or some other representative of the local Division can be the best way to hear about reported crimes in the area that may affect users' or residents' perception of the development. Having the police behind a proposal is also one of the best ways to convince politicians and community groups that their concerns can be dealt with. Keeping the police informed is also helpful in allocating policing resources and developing proactive strategies.

Community women's safety groups and Neighbourhood Watch organizations are other potential resources and allies. Often these groups are more aware of which crimes have taken place in the immediate neighbourhood than police. They may also be persuaded to lead safety audits in the neighbourhood, comment on plans, and creatively problem solve, if they are approached as equals instead of as potential troublemakers.

A Suggested Process: Before the Application

In many cases, informal meetings with the developer and architect precede a formal application. This is the best time to introduce the issue of safety, especially if fear of crime is already a big problem in the area surrounding the proposed development.

The developer and architect need to be seen as partners in the process of this discussion. It is in their interest that the development be perceived to be as problem-free as possible, and that there be advance thinking on safety, especially if safety is going to be brought up by community groups. Their experience will also be helpful.

Some questions to keep in mind include:

1. Learning from experience

What kind of concerns have come up in similar developments in the past?

What kinds of solutions were developed?

2. User groups

Who are the usual users?

Who are the occasional users?

What might their concerns be?

How might they be consulted?

3. Day and night

How might the building or open space be used during the day?

How might it be used in the evening?

Has the architect explicitly addressed the issue of evening use?

The questions in Sections Three and Four, "Factors that enhance safety and security in public spaces" and "Problematic Places: Improving or Avoiding Them" might help spark discussion. Please note that not all of the concerns in Sections Three and Four can be directly affected by planners. Issues such as policing and maintenance, however, can and should be brought up with the appropriate parties as early as possible.

Reviewing the Application for an Initial Report

Here, the planner can ask him or herself the questions in sections three and four. If the development is a housing project, it might be best to start with that section, then go on to specific elements such as lighting or sightlines for further details. Safety might deserve a separate discussion in the report, or it might inform comments on design or parking. If there are particular questions or concerns at this point, you may wish to consult the designated planner for security concerns in the Planning and Development Department.

In a larger application or a secondary plan, there will be many more actors, including other levels of government. There should be some initial discussion to ensure that there is a consensus on safety and security, including its implications. To give one example, the sequence of development has important impacts on safety. If community services, including shopping facilities, schools, and community centres, can be built as new housing comes in, it will help avoid long and possibly unsafe journeys to obtain basic necessities. It will also help to avoid young people having nothing constructive to do in their neighbourhoods, which usually leads to some young people "hanging out" and committing offences ranging from harassment to vandalism to more major crimes. If there are to be large "gaps" in the area, due to the sequence of construction, construction hoardings should be secure, i.e. be well-lit and have lockable entrances.

Consulting with the Public

There are many forms of public consultation, ranging from obligatory neighbourhood meetings for a zoning amendment, to quite intensive participatory planning as part of a housing project. The questions in Sections Three and Four can serve as a guide for planning advisory group meetings. The Safe City Committee can also be called upon as a resource. By remunerating parents for childcare, not going too late (i.e. a 7 to 9 or 9.30 p.m. meeting) and holding meetings in a wheelchair accessible location, you will lessen the chances of excluding women, the elderly, and people with disabilities.

Don't underestimate the usefulness of a **focus group meeting** on safety.

Representatives from the following groups can be invited:

1. Metro Toronto Police Force community relations officer for the Division;
2. Area residents and tenants associations;
3. Neighbourhood Watch or other area community safety groups;
4. Women's groups, youth groups, people who work with children in the area, older people's group, group for people with disabilities.
5. The city councillor for the area.
6. Local shopkeepers or owners of commercial property.
7. Voluntary organizations in the area.

The meeting might include a review of the plans, a safety audit of the existing neighbourhood, and/or set questions on specific aspects of the project. It is better to go into the meeting with specific questions you want answered by the community representatives than engaging in a general discussion to resolve anything.

Questions might include:

1. How would you typically use such a building during the day and evening? Might there be different problems for different users?
2. What kinds of problems have occured in similar developments? How were they dealt with? What worked and what did not?
3. What specific kinds of places might be problematic? How might they be improved?

Discussion will not be limited to design issues. Police-community relations, community crime prevention, and the provision of community services, in general, often come up in discussions of safety. Sometimes these points have design implications, which should be noted. Other comments should be noted and passed on to the appropriate bodies, whether that be the police, other staff in the Planning and Development Department, or staff in the Parks and Recreation or Public Health Departments. The Safe City Committee has produced a number of resource materials that can be brought to meetings, such as a community development guide, *Take Back Toronto! A Guide to Preventing Violence Against Women in Your Neighbourhood*, and several pamphlets. The police and community groups may also bring relevant material.

It is a good idea to think ahead about literacy issues related to handouts and visual materials. Quite often, site plans are too complex to be visualized by non-professionals. They can be annotated to show safety concerns and suggested solutions. Colour can also be used to enhance key points. The City of Toronto Equal Opportunity Office provides a guide to Plain English that can be consulted for written handouts.

It is also a good idea to expect people to suggest solutions to the problems they raise. This both cuts down on unfocussed complaints,

and tells people that the consultation is more than a meaningless exercise. Safety concerns unrelated to the present project should be noted and communicated to the appropriate bodies after the meeting.

There is often the concern that bringing up safety as a topic will encourage people to look for easy scapegoats, such as the poor, the homeless, ex-psychiatric patients, and street prostitutes. One of the advantages of using the questions in this working guide as a basis is to focus the discussion on what can be done with a development to make it a positive contribution to the neighbourhood. Certainly, new housing developments should be expected to add something besides problems to a neighbourhood. But by taking people off the street, filling in an abandoned site, or adding community service space, many social housing projects make neighbourhoods safer and more cohesive.

Writing the Report

In any plan review where safety has come up as a concern, it makes sense to include a section entitled "safety and security issues". This section may deal with the initial concerns, how the architect and developer have responded to the concerns, and any outstanding issues.

In a larger report, such as a secondary plan, there should be a policy statement that clearly enunciates safety and security as a goal. A possible wording, taken from the recently proposed secondary plan for Ataratiri, might be:

"It is the policy of Council to promote public safety and security in X by encouraging the appropriate design and development of buildings, streets, sidewalks, street lighting, parks, and other public and private open spaces. Public safety and security shall be important considerations in all development approvals. New development should be designed to provide overlook and easy physical access to adjacent publicly accessible open space, and allow the space to be seen clearly from the street and other public areas. There should be a clear visual and spatial distinction between publicly accessible and private open space."

Safety and security issues may also be referred to in the context of other issues, such as the provision of community services, open space, design standards, income mix, public transit and accessibility.

Evaluation and Further Steps

We are asking planners to fill out the case sheets in the back of this working guide as issues come up and to submit copies to the designated planner for security concerns in the Planning and Development Department. These sheets can be the basis of discussion in section meetings, and can also influence further research and workshops within the Planning and Development Department. Rather than individually dealing with individual complaints, a process can be set up whereby we learn from our collective experience.

In the long term, the City of Toronto could be involved in projects similar to ones carried out in European cities. In several cities in the Netherlands, ads in newspapers requested residents to send in the location of places where they felt unsafe and suggestions for improvements. An interdepartmental team evaluated the suggestions, prioritized places, and carried out the improvements over a period of two years. In Manchester, the City Council provided a women's group with the resources to develop a large scale survey establishing where violence against women had taken place, the environmental circumstances of the public crimes, and how the planning department could help improve unsafe places.

In Amsterdam, a number of community groups have been given intervenor funding to create their own redevelopment plans for problematic community centres or rail stations. Demonstration projects were funded in several British public housing estates. Participating projects were expected to:

1. consult with community residents through detailed surveys of their experiences and conduct group meetings to discuss common problems and solutions;
2. use residents' recommendations to develop an action plan to improve security;
3. evaluate improvements and outcomes;
4. assess residents' responses to changes.

Other City of Toronto Departments are involved in crime prevention projects. The Housing Department is developing a policy on security for Cityhome, the Parks and Recreation Department is responding to recommendations in *Green Spaces/Safer Places*, the Buildings and Inspections Department is expanding its by-laws on underground garages. Further joint projects with these departments on common concerns can be developed. Joint projects with the Planning Departments of other cities may also be a possibility.

Finally, cities across Canada and around the world are just at the beginning stages of sharing information. Just as we learn more by evaluating what works and what doesn't within the City of Toronto, learning from other cities provides tremendous opportunities to enrich our understanding of how to create safer urban environments.

3

FACTORS THAT ENHANCE SAFETY AND SECURITY IN PUBLIC SPACE

The purpose of this chapter is to explain which factors help make a place seem safer or less safe.

Planning and design factors that enhance safety and security through offering potential to escape from the "moving crime pattern" include:

3.1. awareness of the environment

– the ability to see and to understand the significance of what is around and what is ahead, through adequate lighting, clear sightlines, and elimination of entrapment spots, in order to avoid these situations and particularly to take all possible measures not to go there if being led by a possible attacker under threat or coercion.

3.2. visibility by others

– the ability to be seen, through reduction of isolation, improvements to the mixture and intensity of land use, and intelligent use of activity generators.

3.3. finding help

– the ability to escape, communicate, or find help when in danger, through improved signage, and legible design.

3.1.1 LIGHTING

The Problem

Sufficient lighting during day and night is necessary so that people can see and be seen. Poor lighting is not the main reason most assaults occur at night; rather it is because of other factors such as normal time of socializing, using alcohol, movement to and from work, and scarcity of people.[17] However, improving lighting can have a substantial impact on reducing fear of crime, as a recent study conducted in Britain found. After improved lighting was installed in a badly-lit street and tunnel, 62% of residents felt safer and the number of incidents was dramatically reduced.[18]

As *The Safe City Report* points out: "Public spaces should be lit for pedestrians, not just motorists. The level of lighting in public spaces must be adequate to have a good look at another person when he or she is still a reasonable distance away."

This basic level of lighting is often not met. In 1988, when *The Safe City Report* was published, 75 to 80% of Toronto's street lighting was below the illumination standard set by the Canadian Standards Association of 0.4 footcandles. To put the standard in other terms, lighting should be adequate to have a good look at another person when they are 12 to 15 metres away.

A common sense way to look at the level of lighting is to ask "Are you able to identify a face 15 metres away?". The ability to have eye contact with a person you are about to pass at a reasonable "flight" distance is a common measure of security. Keep in mind that seniors and those with decreased vision will need an increased standard of night lighting.

Not only the level of lighting, but its consistency, is a problem. Many public transit users report the temporary blinding effect of passing by a floodlit bus shelter onto an under lit street. Often, the lighting glares towards the person approaching, making it impossible to see that person. Laneways, inset doorways, and other potential hiding spots adjacent to well-travelled routes sometimes have no lighting at all.

One measure of sufficient lighting in a parking lot or garage is the ability to see the back seat of your car before you open the door. (Photo: METRAC)

Over lighting and inappropriate use of lighting can be a problem. For instance, a person who lights the perimeter of a property so that the light shines into a neighbour's home is hindering informal surveillance rather than helping it. In general, it is preferable to provide more fixtures with lower wattage than a few with higher wattage. Lighting alone will not make a place safer. Lighting the first part of a path leading into a wilderness area, for instance, may contribute to a false sense of confidence in the user that the area is frequented or policed at night. Lighting isolated spaces, such as wilderness paths, may give a false impression that the path is well-used in evening hours and a false sense of security.

The replacement of incandescent lighting with high pressure sodium lighting is occurring in several North American and European cities. This dramatically improves lighting levels and results in significant energy savings.

LIGHTING 3.1.1

What to look for

1. Minimum standards

If the place is intended to be used at night, does the lighting allow visibility? Are pedestrian pathways, laneways, access routes in outdoor public spaces lit to the minimum standard recommended by the CSA of 0.4 footcandles? This should include laneways and other inset spaces, access and egress routes and signage.

2. Consistency of lighting

Is lighting consistent, in order to reduce contrast between shadows and illuminated areas?

3. Proper placement of lighting

Does street lighting shine on pedestrian pathways and possible entrapment spaces rather than on the road or in people's windows? Does lighting take into account vegetation, including mature trees, and other potential blocks?

4. Improper lighting

Can paths or spaces not intended for night time use remain unlit to avoid giving a false impression of use?

5. Protection of lighting

Are the light fixtures protected from casual vandalism by means such as wired glass or a lantern-style holder?

Palmerston Boulevard: good pedestrian-scale lighting on a residential street. (Photo: G. Wekerle)

6. Maintenance

Are lighting fixtures maintained in a clean condition and promptly replaced if burnt out or broken?

Development agreements should state who is responsible for maintenance of lighting in the form of a public notice indicating who to call in case of burnt-out or vandalized lights.

7. Planning for night time use

Do architects' drawings or any other material produced by the developer take into account that the space will be used at night?

It is a good idea for architectural drawings to depict night time use, including the position, quantity and type of lighting.

See also: underground parking spaces, parking lots, bicycle routes, surface transit stops, residential streets, parks, laneways, washrooms.

Cityhome Project, Springhurst and Dowling: good light standard, combining easy maintenance with attractive design. (Photo: V. Pietropaolo)

3.1.2 SIGHTLINES

The Problem

The inability to see what is ahead along a route because of sharp corners, walls, earth berms, fences, bushes or pillars is a serious impediment to feeling and being safe. The ability to see what is ahead and around is known as "visual permeability".

Of special concern are large columns, tall privacy fences, overgrown shrubbery and other thick barriers adjacent to pedestrian paths which could shield an attacker, impermeable landscape screens, long fences that serve to cut off access to means of escaping a place, as well as elements such as insets adjacent to paths which could serve as entrapment spots. Low hedges or concrete planters, small trees, wrought-iron or chain-link fences, transparent reinforced glass or plastic, lawn or flower beds, benches and lampposts all denote boundaries while allowing users to see and be seen.

Routes may be planned with closed views in order to add "interest" to a building or public space. Grade separation and landscape screens are also used for their aesthetic value, to provide private outdoor space, to shield "unpleasant" buildings, parking lots and car traffic. Conflict over right-of-way may lead to odd jogs in tunnels and pathways. While total visual permeability is not always possible, the above motives for blocking sightlines should be measured against potential personal safety effects.

Fire regulations create limitations to secure design. For instance, double doors in parking garages help control the spread of fire, but lead to two points where the person cannot see what is beyond a door. Small glazed panels in some doors do not help much.

Harbourfront LRT Station, Queen's Quay and Bay Street: poor sightlines in this unattended underground entrance. A convex mirror and possibly a video monitor should be installed. (Photo: V. Pietropaolo)

Pocket Park, Corner Bloor Street West and Spadina: this park offers an urban oasis while preserving good sightlines in and out of the park. Notice the well-chosen and well-maintained vegetation. (Photo: V. Pietropaolo)

SIGHTLINES 3.1.2

What to look for

1. Sharp corners

Are sharp "blind" corners avoided, especially on stairs or in corridors where movement can be predicted? Can sudden changes of grade on pathways that reduce sightlines be avoided or ameliorated?

2. Permeable barriers

Are barriers along paths visually permeable when possible?

3. Especially problematic places

Is special care for visibility taken into account in spaces where risk to personal safety is perceived to be high, such as stairwells of parking garages, lobby entrances to high-rise buildings, laundry rooms?

4. Improving sightlines

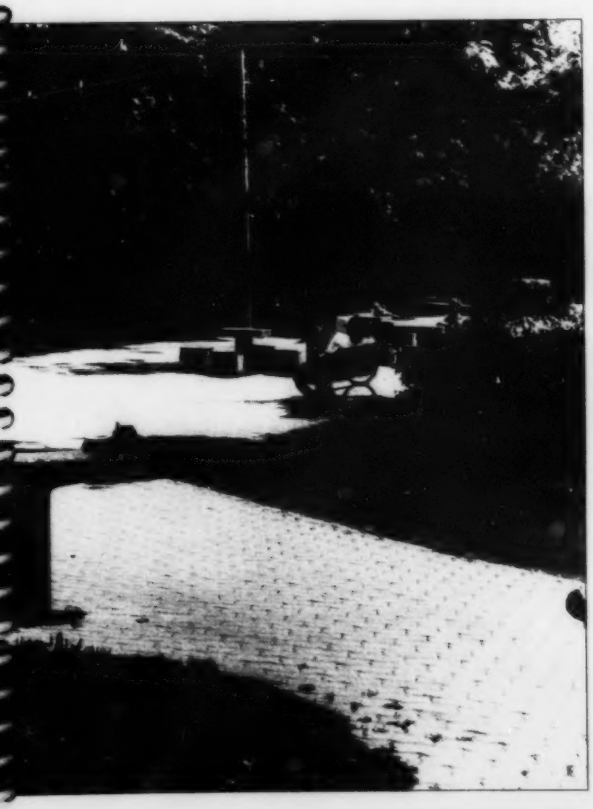
In spaces or paths where sightlines are impeded, can hardware be added to make it easier to see, such as security mirrors?

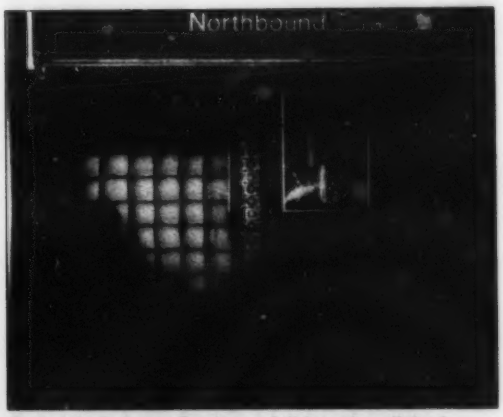
The best security mirror is a ceiling to floor shiny aluminum angled mirror, used in some subway entrances by the Toronto Transit Commission. Convex mirrors of either aluminum or shatter-resistant glass can be provided in corners as an alternative.

5. Future sightline impediments

Are landscaping features which could, in their maturity, serve as screens or barriers to an unimpeded view along pathways avoided?

See also: surface parking lots, pedestrian tunnels and underpasses, surface transit stops, interior of multi-unit housing, footpaths, washrooms.





Rosedale Subway Station: a full-length polished aluminum mirror provides an excellent view around this corner. (Photo: TTC)

3.1.3 MOVEMENT PREDICTORS

The Problem

Movement predictors are a predictable or unchangeable route or path that offers no choice to pedestrians. An attacker can predict where persons will end up once they are on the path. The obvious example is a pedestrian tunnel, but narrow passageways, pedestrian bridges, moving sidewalks and staircases also serve as movement predictors. Movement predictors are of particular concern when they are isolated or when they conclude in entrapment spots.

Walkway Between Sheraton Centre and Nathan Phillips Square: overhead and underground walkways were extremely popular in the 1960's and 1970's, and are still regularly proposed today. In almost every case, pedestrians would rather take their chances with cars. (Photo: V. Pietropaolo)

University and Wellington: a classic assault site. A movement predictor (stairwell leading to the entrance of a shopping mall and subway), with an entrapment area (an unusable and unattractive "patio", invisible from the street). (Photos: C. Whitzman)

MOVEMENT PREDICTORS 3.1.3

What to look for

1. Elimination of movement predictors

Can a movement predictor be eliminated, rather than attempting costly improvements?

Cities like Amsterdam and Manchester are no longer building pedestrian underpasses to speed car traffic. Instead, they are designing safer level crossings.

2. Sightlines

Can a pedestrian see what is in a tunnel and what is at the end of it?

Installation of full-length stainless steel mirrors when the tunnel has a corner or transparent doors to an entrance may help.

3. Lighting

Is lighting adequate and consistent, avoiding pools of shadow? Is natural lighting possible? Do wall and ceiling materials help to reflect light?

While natural lighting of a tunnel helps reduce its "endless night" quality during the day, it must be supplemented during night-time hours, if open.

4. Hardware

Can emergency telephones, intercoms or video cameras be added? Who is viewing them? Is the means to summon help well-signed?

5. Alternative night route

Is there an alternative well-lit and frequently travelled route that can be indicated at the entrance?

While underground tunnels in the downtown district may be preferable during the day, an alternate route for evenings and weekends might be signed at the entrance.

6. Juxtaposition of movement predictor and entrapment spot

Is there an entrapment spot or isolated area within 50-100 m. of the end of the movement predictor? If so, can it be modified?

Tunnels are not necessarily dangerous per se, although they are almost always noted as places that are feared. However, a common stranger assault scenario involves an assailant meeting a victim in a tunnel, then taking her to a nearby dangerous place using coercion or force.

See also: sightlines, extensive high rise residential neighbourhoods, pedestrian tunnels and underpasses, laneways.

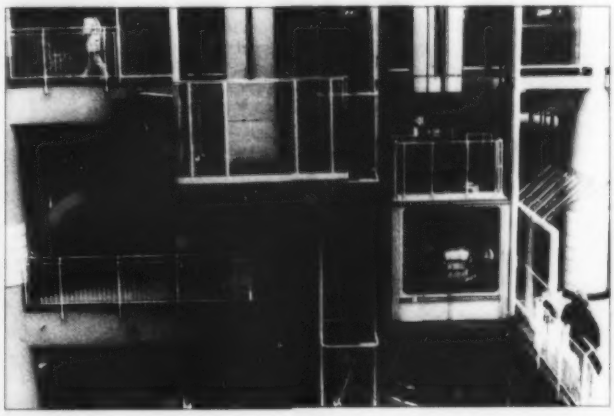
3.1.4 ENTRAPMENT SPOTS

The Problem

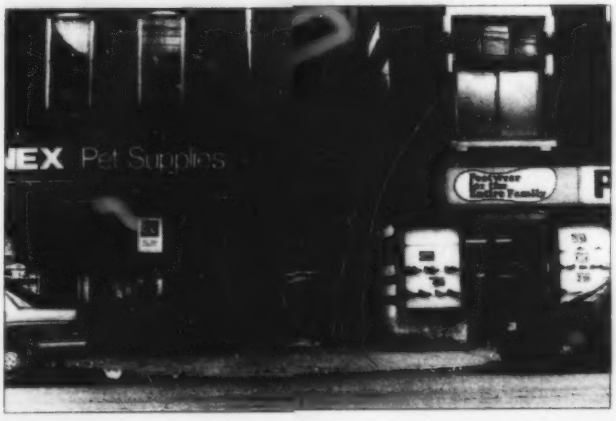
Entrapment spots are small, confined areas, adjacent or near a well-travelled route, that are shielded on three sides by some barrier, whether it be walls or bushes. Examples are elevators, storerooms, fire stairs, dark recessed entrances that may be locked at night, gaps in tall shrubbery, curved or grade-separated driveways or loading docks off a pedestrian route. Parking lots, gas stations, and used car lots can become entrapment spots, especially when adjacent to pedestrian routes. School buildings, isolated by school yards, have also been used as entrapment spots.

What to look for

1. Is there an entrapment spot(s) adjacent to a main pedestrian route, e.g. storage area, hidden area below or above grade, private dead-end alley? Can it be eliminated?
2. Can the area be closed off or locked in off hours? Can, for instance, the stairwell to a locked building be locked as well?
3. Are there deadlocks for storage areas off pedestrian routes? Is there limited access to loading docks or other restricted areas?
4. If an entrapment area is unavoidable, is it well lit and are there aids to visibility such as convex mirrors?



Eaton Centre, Downtown Toronto: these transparent elevators, operating between the shopping and parking levels, avoid the sense of entrapment often felt in elevators. (Photo: V. Pietropaolo)



Inset Fire Exit, Bathurst South of Bloor: security lighting was added by the property owner to this inset area off a well-travelled route after a safety audit. The participants found that this could be used as an entrapment spot for an assault, and suggested adding lighting or fencing the spot off after work hours. (Photo: V. Pietropaolo)

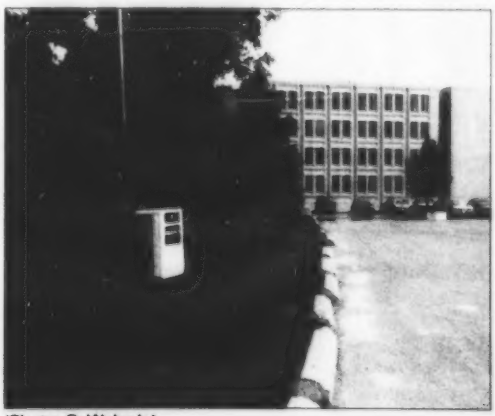
ISOLATION - EAR AND EYE 3.2.1

The Problem

In order for people to feel and be safe, it is vital that they know that people who might help are "keeping an eye on them". A site may well be avoided if it seems desolate, if people judge that signs of distress, like yelling for help, will not be seen, heard, or responded to. This, in turn, will make the place seem and be more unsafe.

Police and other security personnel provide formal surveillance, but cannot see all places at all times. In a recession, security personnel or parking attendants may be cut back in number or be poorly trained. Informal surveillance from adjoining commercial and residential buildings may help mitigate the sense of isolation, as does planning for a greater intensity and variety of use.

In some especially dangerous or isolated spots, there may be the need for formal surveillance in the form of audio monitors, video cameras or staff. But it is important not to over depend on formal surveillance hardware: a video camera, aside from its cost, will only help if there is a twenty-four hour attendant who knows what to do in a dangerous situation and who can be supervised to ensure that surveillance takes priority over reading the paper. In some cases, one person is expected to monitor up to 40 screens, too many to watch all day. Hardware can also easily be vandalized and take long periods to repair.



(Photo: G. Wekerle)

What to look for

1. Informal surveillance of routes

Do building windows overlook pedestrian routes? Are blank facades avoided at street level?

2. Especially problematic routes

Are routes to and from parking lots or garages overlooked?

Post-occupancy evaluation of housing projects indicates that being able to see one's own parking space from one's unit is the preferred situation. This may also be true of smaller office buildings.

3. Hardware to ameliorate isolation

Is there a telephone, emergency telephone or alarm and is it adequately signed?

See also: parking garages, parking lots, pedestrian tunnels and underpasses, surface parking lots, parks, washrooms.

(Photo: V. Pietropaolo)

Emergency telephones, University of Toronto, and Queen's University, Kingston: along pedestrian pathways that are isolated, yet need to be used in the evenings, installing emergency phones is the best way to get help in a hurry.

3.2.2 LAND USE MIX

The Problem

Separating industrial, institutional, retail, and business uses from each other and from residences creates public streets which are unused at particular times of the day and evening. More indirectly, it is difficult to create a sense of community when people use a neighbourhood to do only one thing: whether it be to sleep, play, work, or shop. Recent years have seen a return to the principle of land use mix for environmental and social reasons. But good land use mix is also important for safety reasons.

An example of how land use separation contributes to fear of crime is suburban planning of the post-war period. A bus might stop along an arterial road, with shopping strips and high-rise apartments set back far from the street, and parking lots in the forefront. In order to enter the low-rise residential area, the transit user might have to use a pedestrian pathway bounded by planting and fences, or take a circuitous and equally isolated set of under lit streets. This is hardly a model of planning for safety. While the City of Toronto was largely built up before World War Two, some recent developments incorporate some elements of this problematic land use separation.

Land use mix cannot be considered without taking scale into account. Beyond a certain scale of height and size, which is partly dependent on the scale of the surrounding neighbourhood, residents and workers lose touch with the street and with other developments. A high-rise office tower without animation at street level can hardly be expected to provide informal surveillance of the street; even if workers can see to the street, the view to nearby buildings and the skyline will hold more interest than the figures far below. On the other hand projects such as Main Streets are an example of how the positive health, environmental, and economic effects of smaller-scale development are being recognized.

The answer to land use separation and large-scale single purpose areas has often been to mix and intensify land uses. But mixed uses must be compatible with one another and with what the community needs. For example, adding a school or a community centre to the edge of an already isolated area may not increase safety of that area. Adding higher income housing to a low income housing "ghetto" without the community's consent may not increase safety. Adding one housing project to an office area may not be fair to the people who will live in this potentially isolated and under serviced location.

Cityhome Building, Church and The Esplanade: housing combined with a parking garage, which establishes the grounds as a place for cars, not people. (Photo: V. Pietropaolo)

LAND USE MIX 3.2.2

What to look for

1. Compatible mixed uses

Are there compatible mixed uses that encourage activity, informal surveillance and contact among people during the day and evening? Is the first purpose in mixing uses to provide adequate and appropriate services to the primary users of a development?

Examples include services, workshops, and stores in primarily residential areas, especially if they provide local employment opportunities, and childcare centres and grocery stores in office areas. The advantages of adding services to office areas include the possibility of adding residential uses at a later date.

2. Scale

Is the scale of development consistent with its neighbours?

This is important for design reasons, in order to avoid large gaps in the street. But it is equally important for social reasons, in order to avoid the new development being considered as an eyesore by the neighbours.

3. Balancing "negative" land uses

How might nearby land uses considered negative be balanced by positive measures? Bars and video arcades are inevitable elements of urban life. The question is how other land uses might be added or modified that would help address the discomfort. Would the bar be less of a prominent feature of the street if there were more restaurants, or if its outdoor advertising was toned down?

Riverdale Shopping Centre, Gerrard and Pape; and

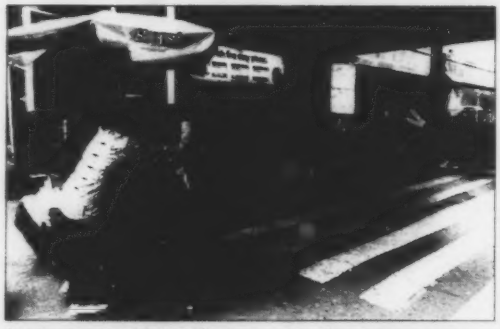
Dufferin Mall, Dufferin and Bloor: large shopping plazas such as these two City of Toronto examples were favoured in the post-war era. Their characteristic large parking lots and inward-turning stores drain streets of vitality and provide isolated spots for shoppers and employees at off-peak hours.
(Photos: V. Pietropaolo)

3.2.3 ACTIVITY GENERATORS

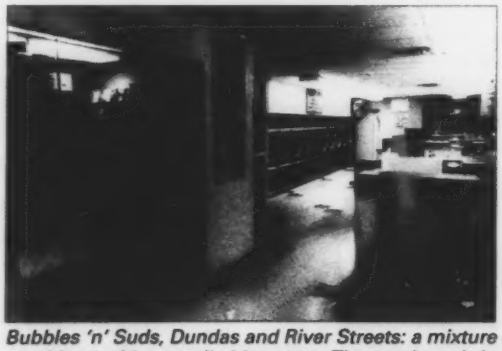
The Problem

Activity generators include everything from increasing recreational facilities in a park, to placing housing in a previously commercial area, to adding an outdoor cafe to an office building. They can include, on a small scale, mixing land use, but also can include intensifying a particular use. The purpose of activity generators is to add "eyes" to the street or open space; to make a place more secure by populating it.

Activity generators do not operate in isolation. It is not enough to add housing to a commercial area if the housing is isolated and without services. Placing a hot dog vendor in a huge parking lot will only make the hot dog vendor scared.



Underpass at Union Station: a hot dog salesperson informally keeps an eye on this path, as well as providing amenity to the commuter on the run. (Photo: V. Pietropaolo)



Bubbles 'n' Suds, Dundas and River Streets: a mixture of activities that works. A commercial laundromat is combined with a small video store. The employee's booth allows both to be viewed. This staffed laundromat, located across the street from Regent Park (a large public housing project) is used by many residents instead of the unstaffed laundromats in their buildings. (Photo: V. Pietropaolo)

What to look for

1. Complementary uses

Are there complementary uses, especially in potentially isolated areas?

A children's playground may be located next to a food stand, with a washroom and telephone nearby. A laundry room may be at ground level overlooking a play area, or next to the building entrance or playroom.

2. Complementary users

Are users complementary?

Avoid forcing users to "run the gauntlet" and pass through an area controlled by people considered to be threatening. For instance, locating a play area for young children next to a basketball court can easily result in the older children attempting to take over the young children's space. Thinking about who is going to use a space and how they will use it is vital when planning activity generators.

3. Reinforcing activity generators

Are activity generators located along an "active edge" or along one or two pedestrian paths in large parks or on the boundary of large developments?

An "active edge" creates a boundary of space that is inviting rather than threatening to passers-by. Encouraging street vendors or food vendors in parks and the sensitive placement of seating areas informally generates activity along the edge of a path.

4. Design for programming activity mix

Do planning and design provide opportunities for enhanced programming, such as cultural and recreational programs in parks or nature walks at night to encourage people to use and "own" the public space?

5. Grade-level activity

Are uses at grade in high and medium density districts?

See also: commercial streets in neighbourhoods, parks, extensive high-rise areas, central business district.

SENSE OF OWNERSHIP/MAINTENANCE 3.2.4

The Problem

Sense of ownership, or territoriality, is often considered a vital factor in making a place less or more safe. If residents in a multi-unit housing project, for instance, feel that the area outside their door does not belong to them, they will feel less safe, and be less likely to intervene in a dangerous situation. Not knowing who has formal ownership can be an important contributor to insecurity, since problems such as broken door-locks or neighbourhood toughs cannot be reported to maintenance or security staff.

(Photo: V. Pietropaolo)

Measures taken to increase the sense of territoriality have sometimes increased crime. The visual or real barriers separating many North American housing developments from surrounding neighbourhoods have created havens for drug dealers and have isolated residents from the wider community. Judging from community consultations in Toronto, London, UK and elsewhere, territoriality-inducing measures, like creating private gardens from open spaces, and decreasing the number of people using an entrance to a building, are considered only one part of a larger set of issues including responsible management, a prompt response to offensive graffiti and harassment, and a safety and security process that truly listens to communities' needs. It is for this reason that we consider the two together.

Older housing projects may be subject to sweeping design changes. The following questions should also be considered:

What to look for

1. Maintenance emergencies

For a maintenance emergency, such as a broken lock, door or window, is a phone number to call prominently posted?

2. Maintenance priorities

i. Are sexist, racist and homophobic graffiti promptly removed from walls and sidewalks either by management or by Public Works if on public property?

ii. Is **litter** picked up and are **repairs** responsive and prompt?

iii. Is imagination used to solve vandalism problems, e.g. wall murals where walls are subject to constant graffiti; formalizing an informal pathway?

This approach is preferable to using prison-like "vandal-proof" materials and treatments.

See also: residential streets, extensive high rise residential areas, neighbourhood parks, commercial streets in neighbourhoods.

3.3.1 SIGNAGE AND OTHER INFORMATION

The Problem

Knowing where you are and which way to turn contributes to a feeling of security. Public signage in Toronto is often inadequate, both in terms of amount and quality. In fact, commercial signage is almost always easier to see and to understand in any public space.

Any initiatives around signage need to take into account that a large minority of Torontonians are functionally illiterate in English and that many more are map illiterate.

Currently what signage there is tends to be of a restrictive nature (e.g. "don't step on grass"; "do not enter") rather than being actively helpful. Symbols are for the most part unstandardized, and imaginative responses to these problems continue to elude both the public and private sectors.

Graffiti and other vandalism also impedes the ability of signs to communicate.

High Park, Near Sunnyside Road: how can a park user know that a streetcar stop and a well-travelled road are less than fifty metres away from this jogging track? (Photo: V. Pietropaolo)

SIGNAGE AND OTHER INFORMATION 3.3.1

What to look for

1. Sign design

Are signs large (identifiable as directional signs from at least twenty metres) and extremely legible?
Do signs use strong colours, standard symbols (for washroom, telephone, information, help), and simple graphics?

2. Sign location

Are signs strategically located at entrances and near activity nodes (e.g. intersections of corridors or paths)? Do they indicate where to go for assistance or help, where there are telephones and washrooms, and where the nearest 'safe place' (e.g. busy street) is located?

3. Maintenance

Do signs indicate how to report maintenance or vandalism problems of the area and of the sign itself?

4. Maps

In large parks and buildings are take-along maps or leaflets available containing information appropriate to the different needs of various groups of users?

These can be re-used by providing drop-off boxes at entrances.

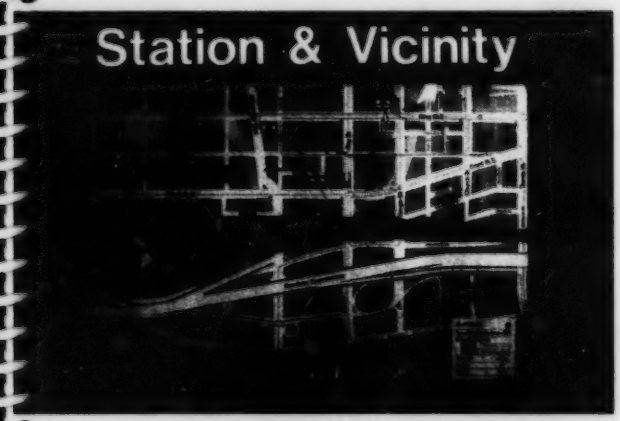
5. Main routes

On the grounds of large buildings or sets of buildings, is the main pedestrian route indicated as such, and are routes which lead off the main route towards more isolated places indicated?

6. Exit signs

Where exits are closed after hours, is this indicated at the entrance to the route?

See also: isolation, underground garages, bicycle routes, pedestrian tunnels and underpasses, neighbourhood parks, washrooms.



TTC Map, Union Station; and

Map, Mount Pleasant Cemetery: Two excellent maps. The TTC map orients you to the vicinity of the station that you are exiting. The Mount Pleasant map orients you to the cemetery park that you are entering. Note how Mount Pleasant encourages the public to use the cemetery as a park. The shrubbery beyond the sign could use a little trim, but at least the road is wide, allowing the pedestrian to avoid a blind turn.
(Photos: V. Pietropaolo)

3.3.2 OVERALL DESIGN

The Problem

The legibility and aesthetic value of public and semi-public space contributes to fear of crime or a sense of security. The degree to which users of an area can find their way around, the "legibility" of a space, influences the feeling of security. Legibility has been discussed in the section on signage, but needs to be stressed again as a creator or inhibitor of security. Pedestrians need well-lit paths with clear edges between activity nodes. Good design lessens the need to depend on signs in order to find one's way around.

A barren, sterile environment surrounded with security hardware will reinforce a climate of fear, while a vibrant and beautiful environment engenders confidence and caring for both people and property.

What to look for

1. Importance of quality and beauty

Is the environment one which a person can enjoy?

Security is not inimical to aesthetic value; making a place more human encourages people to use it. An inviting environment creates an image that attracts people, while a barren or sterile environment can repel potential users.

2. Legibility

Is the design legible: are the entrances and exits, the places to find people and the places to find services such as washrooms or phones obvious to a pedestrian visiting a place for the first time?

The more complex a space, the more signage and other measures to increase legibility need to be considered.

3. Avoiding ambiguity

Does the design of a space make clear the purpose of the space? Are unused and unusable "dead spaces" avoided?

4

PROBLEMATIC PLACES: IMPROVING OR AVOIDING THEM

The purpose of this chapter is to discuss ways to improve places that are commonly considered unsafe. It applies the principles presented in Section 3 to specific conditions.

Community meetings and empirical studies have identified four types of places for priority attention in improving safety in the urban environment:

4.1. transportation-linked
– whether dependent on public transit or having one's own car, transportation-linked urban spaces such as underground garages, parking lots, and the route from the bus stop consistently are the public places where women feel least safe.

4.2. neighbourhood
– a basic requisite of a safe city is the ability to feel safe around one's home and in the surrounding neighbourhood.

4.3. downtown
– if the downtown becomes deserted in the evening due to fear of crime, the economic and social effects are disastrous.

4.4. other places
– places that occur everywhere and that must be used by everyone, such as washrooms, elevators, fire escapes and stairwells, are often perceived as unsafe.

4.1.1 UNDERGROUND AND MULTI-STOREY PARKING GARAGES

The Problem

Underground parking garages are one of the most problematic kinds of urban space, according to studies in Toronto, Manchester, London, and Amsterdam. Combining a single use (car storage), with relative isolation and noise and visual barriers, leads to underground garages being perceived as prime spots for sexual assault and muggings. In addition, many garages are poorly designed and maintained.

Underground parking was one of the first applications of the City of Toronto's concern with security and planning. An amendment to the housing by-law regarding security in residential underground parking garages was adopted in 1988, and an amendment to the non-residential by-law should eventually cover all underground parking garages and multi-storey car parking facilities, including mixed residential-commercial and commercial garages. But by-laws are only the beginning of potential security measures that can be taken.

What to look for

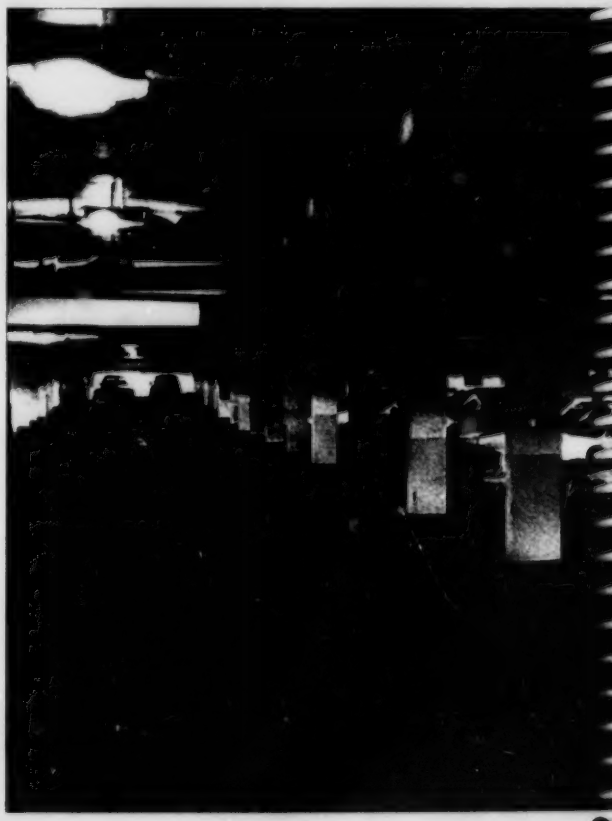
1. Lighting

Is the garage lit to the minimum standard of five footcandles? Are light fixtures protected from breakage by some means such as wired glass? Is the light consistent? Does the colour of the walls allow the lighting to be used efficiently (i.e. is it painted white or some other light colour)?

A common sense way to measure the level and consistency of lighting is: "Can you see in the back seat of your car before entering?". Whitewashing walls not only increases the efficiency of the light, it also looks cleaner and more pleasant than bare concrete.

2. Sightlines and potential entrapment spots

Are stairwells and elevators located where they



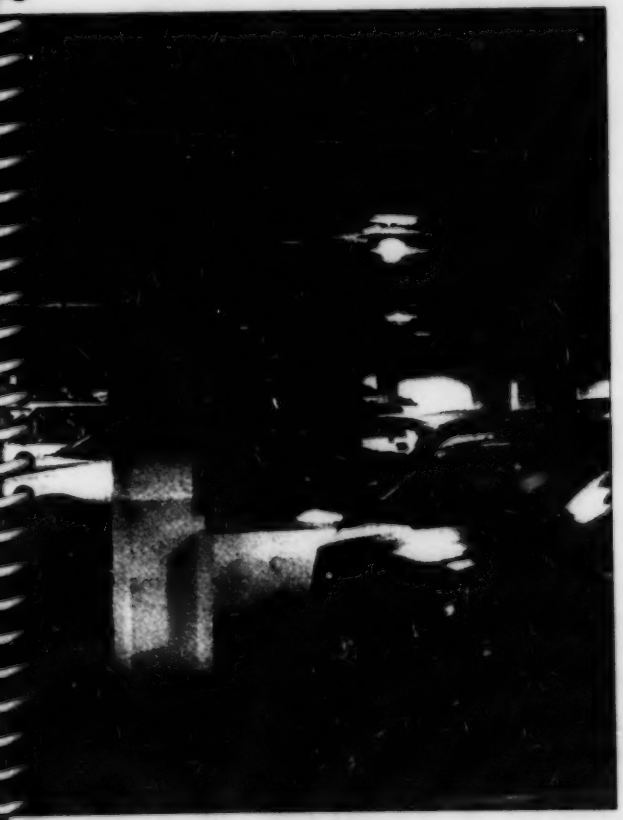
City Hall Employee Garage: this part of the City Hall parking garage complex offers good lighting (improved by painting walls and ceiling white) and relatively clear sightlines. Missing are good directional signs and any indication of how to summon help.
(Photo: V. Pietropaolo)

UNDERGROUND AND MULTI-STOREY PARKING GARAGES 4.1.1

can be viewed by the maximum number of people, for instance, near the edge of a building where there is a glass wall, or at the entrance to a shopping area? Is the major route(s) from the garage to the exit(s) free of sharp turns? If there are sharp turns or pillars obstructing sightlines, how can this be modified using mirrors or other methods? Are potential entrapment areas such as storerooms along the route kept locked?

3. Attendants

Are booths located so that there are good sightlines? Are attendants trained to respond to emergencies? If attendants are not responsible for maintenance and repair, are there numbers posted to report maintenance problems?



4. Formal surveillance through patrols

Will there be some form of formal surveillance, such as regular patrols by maintenance staff or by pairs of residents? Will they be able to promptly repair broken bulbs and other common maintenance problems? Are they trained to respond to emergencies?

5. Formal surveillance through hardware

Especially in larger garages, are there emergency telephones on each level with the accompanying raised illuminated international telephone signs? Are there video cameras, especially in stairwells, elevators and other isolated areas? Is there some form of audio linkage, and is it clearly signed? Who monitors the audio or video linkage, and are these people trained to respond to emergencies?

6. Signage

In all garages, are the exits and main routes clearly signed, using distinctive colours and symbols? Especially in commercial garages, are there location identification signs, using distinctive colours and symbols so that casual users can more easily relocate their cars?

7. Designated spaces or escorts

In office building garages, is it possible to reserve certain spots near the attendant for people who regularly work late, especially female office workers? Can an escort service be provided in large workplaces by the building owner or the workplace? Are designated spots for people with disabilities near an attendant if there is one, and otherwise near a safe exit?

8. All night car parks

For 24-hour multi-storey car parks, is there an attendant at all times who is trained to respond to emergencies?

See also: lighting, isolation, maintenance, signage, extensive multi-storey residential neighbourhoods.

4.1.2 SURFACE PARKING LOTS

The Problem

While underground parking garages have received attention from the City of Toronto, surface parking lots have been neglected. Like underground garages, surface lots can be badly designed, poorly lit, and isolated.

Surface parking lots range from small 3 or 4 space lots behind, in front or adjacent to buildings, to very large lots (200 spaces) found around shopping malls. Where lots are larger than 50 car-spaces, additional precautions are necessary and can be made financially feasible through parking rental.

Wilson Station parking lot. (Photo: G. Wekerle)

What to look for

1. Lighting

Is lighting adequate to see the inside of a car's back seat before entering the car? Is lighting consistent, avoiding shadows?

2. Sightlines

Are sightlines within and to the lots maximized, through the elimination of dense bush or tree landscaping, solid fences or advertisements which block the view, and unnecessary buildings or sheds?

Sightlines should especially be maximized from the entrance to a lot and from the parking attendant's booth, if there is one.

3. Entry/exit

If there is an attendant, is there a single entry/exit to allow supervision of vehicles?

4. Attendants

Are attendants trained to know how to respond in an emergency? Are they periodically supervised and audited?

5. Avoiding entrapment

If there is no attendant, are there several well-lit, clearly marked entrances, in order to avoid the lot acting as an entrapment spot?

Parking lots in front of convenience stores should be discouraged. While marginally safer and more convenient for the car-user, these parking lots weaken the link between building and street, and are a traffic safety hazard as well. In entry-ways off commercial streets, wrought iron fencing or low-growth, low maintenance bushes are preferable to other barriers, since some bushes require a high level of maintenance in order to avoid growing too high for adequate sightlines or developing gaps that could be used as a hiding spot.

6. Informal surveillance

Is informal surveillance of surface lots or parking for residences encouraged through placement of windows in new buildings so that they overlook the lot, and placement of new lots so that they can be overlooked by stores and residences?

7. Formal surveillance and hardware

In larger lots, are there regular patrols by trained staff? Are there emergency telephones throughout the lots with accompanying raised illuminated international telephone signs? Is there some other way to summon help promptly?

8. Signage

Are there location identification signs in larger lots so that passengers can more easily relocate their cars?

9. Designated spaces or escorts

In office building lots, is there provision for an escort service or for reserved spots close to the building entrance for people who regularly work late? Are priority parking spots for people with disabilities located near the parking attendant when there is one, and near an exit to the street or an accessible elevator when there is no attendant?

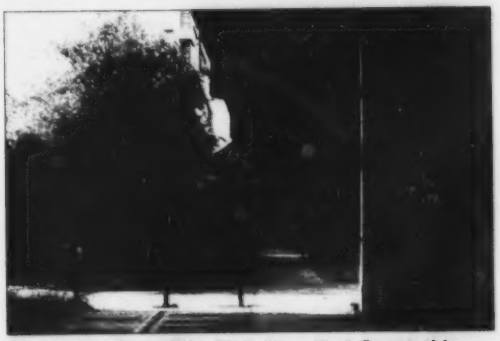
See also: lighting, sightlines, entrapment spots, isolation, signage.

BICYCLE ROUTES 4.1.3

The Problem

A system of good, safe bicycle routes between Toronto's downtown and its outlying neighbourhoods and also among the outlying neighbourhoods themselves, is essential for the increase in bicycle commuting that will help bring about a Healthy City. Too often, bicycle routes have been planned for recreational use only, in relatively isolated places (e.g. much of the Martin Goodman Trail), or with too few entrances and exits (e.g. the Lower Don Trail).

Planning of routes has important security implications, for not only are some routes isolated, especially in the evening, but the "eyes on the street" of evening and night time bicyclists are lost.



Martin Goodman Bike Trail, Near York Street: this portion of the bike trail veers off from Queen's Quay West, and is generally avoided by bicyclists. While offering "safety" from cars, it is isolated, underlit and wholly uninviting. (Photo: V. Pietropaolo)

What to look for

1. System of through routes

Is there a clear system of through routes on city streets, preferably not separated by visual barriers?

2. Secure routes

Are commuting routes chosen not only for convenience and lack of detours, but also for security?

This means routes with high pedestrian and car traffic during the day and evening, with as much continuous building, as few "empty spaces", and as few underground crossings as possible.

3. Recreational routes

Are recreational routes designed to have at least one clearly marked "exit" to an area of high pedestrian and car traffic every 500 metres?

4. Signage

Do entrances to routes through isolated areas such as parks and industrial areas indicate, in words and through the use of maps, alternate night routes, as well as the fact that the route will be entering an isolated area?

5. Lighting, signage and sightlines

Are routes well-lit, well-signed and do they avoid underground crossings? Are high bushes and dense clusters of trees avoided immediately adjacent to the route and especially at predicted stop points like road crossings?

7. Formal surveillance of routes

Does the Metropolitan Toronto Police Force provide bicycle patrols along these paths?

8. Bicycle parking

Can bicycle parking spaces be informally surveyed from streets, buildings, or parking attendants?

Like entrances for people with mobility impairments, bicycle parking is sometimes left to the leftover parts of buildings and streets. All parking, including bicycle parking, should ideally be located where it can be viewed by the owner of the vehicle. Failing that, informal surveillance should be possible.

See also: lighting, sightlines, entrapment spots, isolation, signage.

Amsterdam Bike Path: Amsterdam is one city where there is a network of bicycle lanes, physically but not visually separated from the street and pedestrians. (Photo: G. Wekerle)

4.1.4 PEDESTRIAN TUNNELS AND OVERPASSES

The Problem

Grade separation occurs when tunnels or overpasses separate pedestrian or car traffic. While the rationale for building tunnels or overpasses varies (ranging from traffic safety, to deconcentrating pedestrian traffic, to concentrating the opportunities for commercial profit), the net result is that opportunities for natural surveillance are diminished.

Underground pedestrian malls share some of these problems. They drain life from downtown streets. While informal surveillance in underground malls is possible during hours in which stores are open, they can be very scary places after hours. The question of formal surveillance or policing is also difficult to resolve in private malls. There have been concerns expressed about over-zealousness on the part of private security firms, who in some cases are accused of racial or income discrimination.

Pedestrian underpasses create security problems, especially when there are dangerous places in the immediate vicinity. Manchester, Wandsworth, Glasgow, Sheffield, Portsmouth and Poole in the United Kingdom, and several cities in the Netherlands, have a policy to construct no more pedestrian underpasses, and to replace existing underpasses, where possible, by improved ground level facilities.

Traffic safety can be realized by means other than pedestrian underpasses. These include: level crossings at railroads (where possible), greater use of pedestrian crossings, widening the sidewalk where pedestrian traffic is too great, limiting car traffic through bus and bicycle lanes. Current Toronto policy is to avoid overhead pedestrian walkways or skywalks, which are not a good alternative since they share some of the same features as underpasses.

Existing underground pedestrian pathways, especially those malls in the centre city found under office buildings, can't be wished away. In the case of existing malls, the provision of alternate above ground routes, the presence of a good wayfinding system, and the introduction of design standards for retrofitting existing pathways as well as new pathways are all priorities.

Bay Street Underpass, South of Front Street: recent improvements to this underpass included better pedestrian lighting and the glassing in of the walkway (to screen out mud and carbon monoxide). Exits to the street are provided at two points. The underpass is now tolerable, but still hardly pleasant.
(Photo: V. Pietropaolo)

PEDESTRIAN TUNNELS AND OVERPASSES 4.1.4

What to look for

1. Avoidance of the necessity for grade separation

Is this tunnel, underpass, or overpass necessary, i.e. are there no alternatives? If there are overriding reasons why a tunnel should continue to exist, are there signs at each end of the tunnel indicating where the tunnel leads, and an alternative route to using the tunnel, during off-hours?

The extension of downtown pedestrian tunnel networks is still under debate in Toronto and elsewhere. The existence of pedestrian tunnels outside the downtown area should be reviewed from a security perspective, in consultation with the community.

2. Closure of tunnels after hours

Is the tunnel leading to places which are not open twenty-four hours (e.g. the subway system, an underground shopping mall) kept locked when these places are not open? Do signs at street level indicate the hours when a tunnel is open and an alternate route?

3. Dimensions

Are new tunnels at least twelve feet in width and ten feet in height? This avoids the claustrophobic quality of some tunnels, and allows a quick turn-around in the case of emergency.

4. Lighting

Is the tunnel lit from natural or artificial sources to a standard no less than 4 footcandles? Is the lighting fixture protected by wired glass or some other method? Is the lighting regularly checked, and is there a number posted so that users can report maintenance problems?

5. Surface

Are the surfaces of the tunnel clean, light, easy to maintain, and reflective?

6. Avoidance of sharp corners

Is the tunnel straight and without recesses? If it is necessary that the tunnel take a turn of more than 60 degrees, is there an angled full-length aluminum mirror placed so that pedestrians can see around the corner?

7. Formal surveillance

If the tunnel is more than 100 feet long, is there an emergency telephone or some other alarm device? This should be paid for and maintained by the developer.

8. Activity generators

If the tunnel is long and well-used during some point in the day, can a set of self-supporting activity generators (see Section 3.2.3) help make it safer?

Tunnels can be equipped with pay telephones, garbage containers, washrooms, and even stores. These activity generating elements should be placed adjacent to one another.

9. Entrance to tunnel

Is the entrance and exit of a tunnel visible from stores and/or residences or from frequent pedestrian traffic?

See also: movement predictors, entrapment spots, activity generators

4.1.5 SURFACE AND UNDERGROUND TRANSIT STOPS

The Problem

The design and location of new subway stations and surface transit stops is primarily the responsibility of the Toronto Transit Commission in Toronto. But City of Toronto staff are consulted on surface and underground transit stops, especially when new stops are planned as part of a development.

Stops and stations in industrial and office areas are often isolated after office hours. Surface transit stops in neighbourhoods are also sometimes located in isolated spots, or spots where entrapment is possible.

Bus Stop, Dufferin South of Queen Street West: this is a problematic bus stop. It is isolated from view by shops and close to a laneway with potential entrapment spots. Area residents, cited in a safety audit, say that they avoid waiting here.
(Photo: V. Pietropaolo)

Bay and Dundas Street West: a bus shelter in downtown Toronto that combines good visibility and sightlines. It avoids entrapment and over-lighting, two common complaints.
(Photo: G. Wekerle)

SURFACE AND UNDERGROUND TRANSIT STOPS 4.1.5

What to look for

1. Lighting

Is the area adjacent to transit stops well-lit? If there is a shelter, is it not so over lit that the user feels like a fish in a bowl?

2. Sightlines

Are persons at transit stops and entrances to subways clearly visible from streets or adjacent buildings? Can walls, berms, bushes, hills, hydro boxes or solid fences which block the view be eliminated or ameliorated? If there is a shelter, is it transparent with no obstructing advertisements or graffiti?

Stops in isolated locations with poor sightlines should be moved to a spot where informal surveillance can take place, if possible.

3. Avoidance of entrapment spots

If there are nearby entrapment spots created by landscaping or the built form, can they be eliminated? If there is a shelter, is it designed to reduce the possibility of entrapment through multiple exits?

4. Maintenance

Is the shelter and bus stop well-maintained and free of rubbish? Is it identified by number and is a number to call for maintenance posted?

5. Reducing isolation

If the bus stop/subway entrance is adjacent to vacant land, alleys, ravines, parking lots, or buildings set back far from the street, can it be moved? If not, is formal surveillance through a video or audio link with the ticket collector or some other staff person (e.g., night watch in an office building) possible? Is there a telephone nearby?

6. Signage

Are there passenger informational signs giving routes and times?

Long waits can be avoided and vulnerability decreased at a stop by knowing when a vehicle will arrive. Bus stops could also have vicinity maps and the location of the nearest telephone.

7. Formal surveillance

Have measures been taken to improve transit drivers' ability to respond to dangerous situations, through two-way radios for instance? Are drivers trained to respond to emergencies?

8. Patrols

Do the Metro Toronto Police Force know the location of transit stops that have proven problematic i.e., one where there has recently been a rash of robberies? Is it possible to involve persons who live or work near a dangerous bus stop - local residents, merchants, a school - to report suspicious persons?

9. Consultation

Has the adequacy and safety of public transit been considered when consulting on any new development?

4.2.1 RESIDENTIAL STREETS

The Problem

Some residential streets are considered very unsafe by neighbourhood residents. Of particular concern are streets with land uses which provide additional security risks, such as school yards, parking lots, construction sites, derelict buildings, unfenced properties, or garages left open. Superblocks with pedestrian streets create a fortress effect that limits informal surveillance by residents and non-residents alike. While the introduction of public access streets is often opposed by residents who do not want to lose traffic safety, if the redevelopment is accompanied by intensification of shops and services that assist residents and might attract non-residents, the benefits can outweigh the costs.

Another controversy associated with residential streets is on-street parking. Next to securable garages, on-street parking is the choice for many car-owners. The safety concerns about people lurking in or next to parked cars must be balanced with the concern about parking in relatively isolated alleyways, lots or garages. On-street parking can also limit the speed and number of cars, which in turn can make using the street safer from a traffic safety perspective.

What to look for

1. Lighting

Is lighting sufficient to see a person approaching at a distance of 15 metres? Is the lighting sufficient for the sidewalk as well as the street? Can small signs be added to the fixtures saying where to report repairs? Are trees and bushes trimmed adequately not to shade the fixtures?

2. Laneways

Are entrances to alleys or laneways well-lit and clearly visible from the street?

3. Continuity and clear ownership

If there are "gaps" in the street such as school yards or empty lots where an assailant can pull a passer-by into an isolated area, are these made priorities for lighting, fencing, and possible redevelopment?

4. Informal surveillance and activity generators

Are there opportunities for informal surveillance on the street, through the erection of porches and balconies, small convenience stores or community gardens? Does the street provide opportunities for children's play visible from their homes? Are there places on the street where adults can clean cars, sit on benches or engage in other casual social and recreational activities?

5. Widening of sidewalks

Where excessive car traffic is affecting casual use of the street during the day and the evening, is it possible to reduce car traffic through the widening of sidewalks or solutions like Danish woonerfs (which restrict car speed through adding obstructions to the street that facilitate pedestrian use)?

6. Superblocks

Does the street allow some passing through by pedestrians, public transit vehicles, and car-drivers who are coming to shop in stores, visit, or use community services? If not, can these activities be created without excessive community disruption?

RESIDENTIAL STREETS 4.2.1

7. Residential street pattern

Is the lay-out of new residential streets predictable? Would a stranger entering a street know how to get out?

The pattern, found in many Toronto suburbs, of unconnected cul-de-sacs can be very confusing to pedestrians trying to find their way. Toronto's traditional grid street pattern is preferable: short blocks and predictable lay-out lessen the possibility of entrapment spots, and allow familiar and unfamiliar users to understand their surroundings in a more comfortable way.

8. On-street parking

Is on street parking a possibility, especially for residents who commonly work late and may be afraid to use other alternatives?

See also: lighting, entrapment spots, activity generators, laneways.

Top:
Porches on a residential street allow informal surveillance in the summer. Encouraging the porch lights to be left on overnight is an important way to get more pedestrian-scale lighting.
(Photo: V. Pietropaolo)

Middle and Bottom:
"Living Streets" in Amsterdam and Delft: residential streets where car traffic is restricted but not eradicated are common in the Netherlands and Scandinavia. They allow on-street car and bicycle parking, and open up the entire street surface to children's play. A success socially, environmentally and from the standpoint of safety.
(Photos: G. Wekerle)

4.2.2 COMMERCIAL STREETS IN NEIGHBOURHOODS

The Problem

Neighbourhood commercial streets are often used in the evening and night-time. It is on these streets that convenience stores and transit stops are most often located. Recent main street developments have often eroded the traditional pattern of housing above shops, with its potential of informal surveillance. The social value of frequenting local businesses has declined, along with the concept of local business people "watching out" on the street.

Twenty-four hour fast food and convenience outlets, with their attendant front-door parking strips, create gaps in the streetscape, and sometimes serve as hang-outs for illicit activity. While hanging out on the local street corner is neither illegal nor antisocial per se, it can be perceived as frightening if there is only one group (e.g., teen-aged boys, street people) who are out. On some main streets, drug dealing and sex trade businesses have become established, increasing residents' levels of fear. The goal, therefore, is not to clear out the people presently using the street as a social or commercial gathering place, but to leaven the mix with a greater variety of people, which will hopefully curb antisocial behaviour.

Bloor West Village: a wonderful mix of shops and housing, pedestrians and cars, active and passive use.
(Photo: G. Wekerle)

COMMERCIAL STREETS IN NEIGHBOURHOODS 4.2.2

What to look for

1. Housing above stores

Is housing available or planned for above stores? Are balconies and windows from living areas in new and existing upper-storey housing along commercial streets encouraged?

In Toronto, the reintroduction of housing along arterial strips is being actively encouraged with the "Main Streets" initiative.

2. Signage

Are the location of telephones, washrooms and baby-changing facilities in public establishments along commercial streets clearly signed?

Telephones and well-equipped washrooms attract customers during the day. Telephones and publicly accessible washrooms can also be a necessity in the evening and night. They should be located in or near a restaurant or store that has late opening hours. Store-owners and local business associations may also wish to institute a "green light," "safe haven" or other security program. In a run-down part of San Francisco, stores, restaurants and bars that display a "safe haven" sign offer emergency phone calls or simply a safe place to escape a scary situation.

3. Intensification of use

Are there street vendors, street entertainers, sidewalk cafes, and other activity intensifiers on commercial streets?

The criteria for licensing street vendors and sidewalk cafes should take into account the need to improve public safety. The goal is to get a variety of people hanging out on neighbourhood commercial streets in the evening, not to exclude certain groups.

4. Night use

Is the night use of streets encouraged through a mix of commercial uses with different closing hours?

If a bar is the only commercial use that is open until 1 a.m., perhaps a convenience store or a restaurant can be encouraged to open later.

5. Sidewalk width

Is the width of the sidewalk adequate for walking a comfortable distance from both buildings and the street?

If sidewalk cafes are blocking the sidewalk, perhaps the answer is widening the sidewalk, not banning the cafes.

6. Continuity to street edge

Are streetfront buildings built up to a continuous setback line, thus eliminating dead spaces and entrapment spots adjacent to the sidewalk?

7. Entrapment spots

Are recessed, below and above grade, entrances clearly visible from the street and well-lit?

8. ABMs

Do Automated Banking Machines have their entrances on commercial streets? Are they visible from the street, at street level, and adequately lit? Are there entrances not adjacent to bus stops, which could allow criminals to loiter near an entrance by pretending they are waiting for a bus?

See also: entrapment spots, land use mix, activity generators, signage, transit stops.

4.2.3 NEIGHBOURHOOD PARKS

The Problem

Men use parks more than women, and part of the reason for this is women's fear of crime. A 1988 survey of people who used High Park found that the ratio of women to men during the day is one to two, and the ratio in the evening was one to three.[19] While smaller neighbourhood parks may have a more even distribution of women to men during the day, this is at least partially due to female caregivers (including childcare workers) tending children, rather than going to parks on their own.

The problem of parks, as a relatively isolated space, has already been discussed in the section on isolation. It should be stressed that isolation in parks cannot and should not be completely eradicated. The ability to escape the city in parks, including ravines and other forms of urban wilderness, is essential to many urban-dwellers' health. The issue is to create a choice and for the user to be in control: There is a need for areas of parks where safety is paramount, such as the main routes through parks, or the edge between park and street, along with areas of parks where preservation of nature is paramount. The use of these latter parts of parks can be optional.

What to look for

1. Lighting

Is lighting along paths and areas intended for night use at the same level as streets (i.e., approximately .4 footcandles)? Is there a clear demarcation in terms of lighting levels between areas that are likely to be deserted at night, and areas where there is likely to be activity? Are landscaping elements chosen and maintained so that they do not block light? Are there evening park patrols that include checks on lighting?

2. Sightlines

Do pathways have unimpeded sightlines, especially where they curve or change grade? Is it possible to see most of a small park or play area from the street? Are small parks or the edges of larger parks overlooked by housing or commercial establishments?

3. Entrapment spots

Do pathways have a border of low-lying or high-branching vegetation, as opposed to trees and bushes which can easily create entrapment spots and reduced sightlines? Are multiple entry and exit points provided to a park or playground?

David Crombie Park in St. Lawrence Neighbourhood: an old-fashioned avenue in a new neighbourhood, with good lighting, sightlines and visibility from surrounding buildings. A great urban space.
(Photo: V. Pietropaolo)

NEIGHBOURHOOD PARKS 4.2.3

Entrance to High Park: activities such as these help to bring people into a park during day and evening. The flexible spaces for these activities can and should be encouraged. (Photo: V. Pietropaolo)

4. Signage

Does signage clearly indicate, using words, symbols, and maps, the location of telephones, washrooms, isolated trails, less isolated paths, and any places where people are likely to be at most times that the park is open (e.g. tennis courts)? Are the signs at decision points, such as the intersection of two major paths, or the entrance to the park? Do the signs indicate where and how help can be found, and where maintenance problems can be reported?

5. Location of activity generators

Are activities located either along the edge of parks, or gathered together along pedestrian pathways?

At least some benches, fitness trails, tennis or basketball courts, and bicycle paths in parks should be located to avoid isolation, by placing them adjacent to the perimeter of parks, along through roads, or combining them with the most used pedestrian path. For wilderness trails, adequate signage should indicate that these trails take users into isolated areas, and suggest alternate routes. Washrooms should be near telephones and children's playgrounds. Food kiosks should be available in larger parks, especially near playgrounds.

6. Planning for a range of activities

Do larger parks provide opportunities for leisure activities beyond team sports and children's playgrounds?

Some examples include community services, cafes, snack bars, community gardens, gardening centres, small zoos, childcare programs, horseshoes, and "kneeling gardens" for the physically disabled.

7. Encouraging night time use

Does the planning and design of the park take into account the possibility of night time use?

Comment: Even small neighbourhood parks can program activities, such as night baseball games, or evening nature walks, that bring a range of people into the park after dark. Larger neighbourhood parks can organize a buddy system for jogging. Such elements as lighting around tennis courts and baseball diamonds, or a less isolated jogging trail, can reinforce these activities.

8. Formal surveillance

In parks larger than "tot lots", is formal surveillance provided either by police or park attendants? Do park attendants know how to respond to emergencies? Can park attendants participate in generating activities? Are the hours of park attendants posted?

In Toronto, police bicycle patrols are being introduced. In the New York City "Park Ranger" system, young people are hired to give information on the park as well as enforce by-laws and provide non-emergency assistance.

See also: lighting, entrapment spots, intensification of land use, signage, legible design.

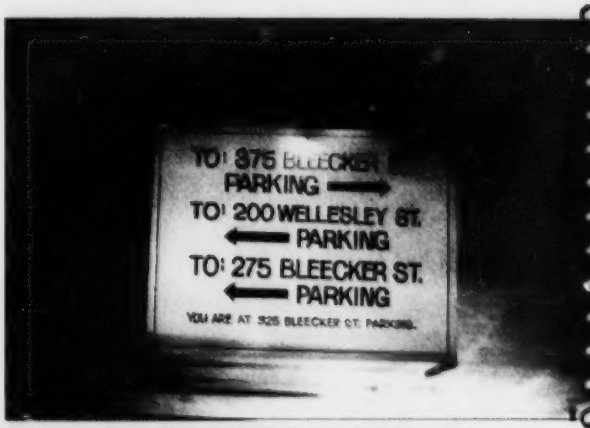
4.2.4 EXTENSIVE HIGH-RISE RESIDENTIAL AREAS

The Problem

Extensive high-rise residential areas tend to have one or more of the following characteristics: high percentage of "empty" or largely unused space, separation into large zones which are exclusively used for driving, walking, parking, shopping, or recreation, poor signage and related sense of "placelessness", limited opportunities for natural surveillance, and a sense of isolation. These problems are often exacerbated in lower income areas, where maintenance may be poor to non-existent, and formal surveillance limited.

Many American and European designers have turned their attention to low-income high-rise residential areas, among them, Oscar Newman[20] and Alice Coleman.[21] Criticisms of the design solutions proposed by Newman and Coleman include the possibility that expensive design "solutions" will lead to the eviction or replacement of present lower-income residents. The reliance on hardware solutions has worked against the implementation of management changes and community crime prevention initiatives. In public and private low-income high-rises alike, there has been a tendency to impose "top-down" decisions without adequate consultation with the neighbourhood. At the same time, positive principles in privately owned open space may be constrained by the owner's wishes.

Like the creation of pedestrian tunnels and huge parking garages, the first principle when considering extensive high-rise residential areas is to avoid them. They are inherently problematic from the perspective of personal safety; they also are questionable from environmental and social perspectives.



St. James Town Parking Garage: painting the walls white and signage have helped this huge garage in a low income, high-rise neighbourhood. But the most important improvement has been in maintenance: abandoned cars removed and regular repairs have begun to restore a sense of security.

"Playground": who would use this dirty and decrepid playground, even when the swings are up? An acceptable site is wasted.
(Photos: V. Pietropaolo)

EXTENSIVE HIGH-RISE RESIDENTIAL AREAS 4.2.4

What to look for

1. Lighting

Are pedestrian pathways leading to buildings lit to public street standards (.4 footcandles)? Do the lights shine on the sidewalk while avoiding the lower floors of buildings? Who will maintain lighting, and are there signs indicating where to report maintenance problems?

2. Safe routes

Do essential routes through the area provide clear sightlines, as opposed to "picturesque" corners? Is it possible to promote activity that will result in more eyes on the street along these routes, possibly including the re-introduction of public roads?

Priorities for safe routes include the routes leading to and from transit stops, parking lots, and shopping areas. It is easier to provide safe routes when the streets adjacent to the high-rise building are public.

3. Intensification

Is it possible to fill in "empty" space, especially at grade, with human scale housing, commercial and community services that are complementary to the needs of the existing residents? Is it possible to create community gardens, school farms, or workshops on little used land or are these already present?

4. Privatization

Is it possible to allocate part of the space to individual households to use as yards or gardens (if residents agree)?

5. Formal surveillance

Through strategic location of central management offices and/or training of management staff to respond to emergencies, are there formal "eyes on the street" during the day and evening? Does the Metro Toronto Police Force patrol this area? Are residents encouraged to provide surveillance and report suspicious activity?

6. Signage

Are street numbers visible from the public road, and are there site maps at central locations for visitors, delivery people, and emergency services?

7. Access to individual buildings

Are entrances to individual buildings clearly visible from adjacent streets?

8. Avoidance of "running the gauntlet"

Are especially vulnerable groups such as older people located near essential services such as stores or public transit?

Locate people with mobility impairments, including some elderly, near services, and locate families with young children near playgrounds. This is not only for ease of access, but also avoids "running the gauntlet" past teenage hangouts.

9. Space to organize

Does management have explicit policies related to security which allow for improving the quality of the environment and fostering a sense of common purpose? Is there meeting space or a community centre so that residents can organize and involve themselves in defining the problems and creating solutions?

Space should be accessible from grade and have natural light.

See also: entrapment spots, land use intensification, overall design, interior spaces in multi-unit housing.

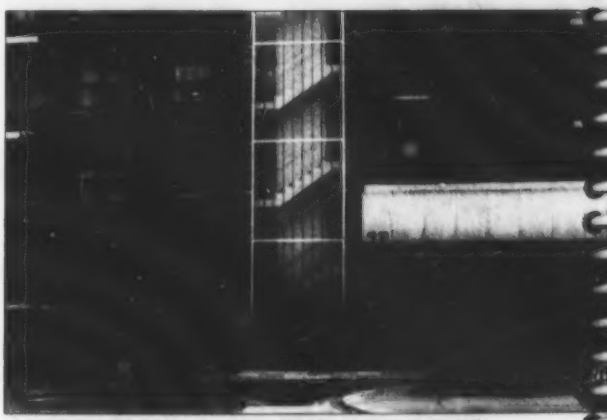
4.2.5 INTERIOR SPACES IN MULTI-UNIT HOUSING

The Problem

Stairwells, laundry rooms, elevators, entrances to buildings are often cited by residents as sites of assaults. What these places have in common are isolation and poor sightlines.

Maintenance is another concern. The provision of entrance doors with intercoms will only accomplish its purpose if the door locks are replaced when damaged and intercoms work. Improper tenant education also results in misuse of security features, such as lobby doors being propped open with a brick or not asking who is at the other end of an intercom before buzzing them in.

In the case of housing, it is important to once again stress that design is not the complete answer. Ongoing process issues, including tenant involvement in choosing and maintaining security features, housing allocation, staff/tenant relations, and inter-tenant conflict resolution are security issues that need to be on the table when a safety strategy is being discussed for a building. This is especially true for new buildings: a security strategy needs to be developed before problems begin. In Toronto, designers have begun to expand their comments beyond the exterior of new multi-unit apartment buildings into interior common spaces. Other actors, such as architects, developers, and future residents (if known) need to give these spaces careful consideration before problems begin.



Apartment Complex, London, England: this stairwell is clean, naturally lit, and visible from the street.
(Photo: G. Wekerle)

INTERIOR SPACES IN MULTI-UNIT HOUSING 4.2.5

Laundry Room, Oak Street Co-op, Gerrard and River: this is the view of the laundry room from the entrance to the apartment building. The laundry room has a room adjacent, which is used for meetings or as a playroom for children whose parents are doing laundry. (Photo: V. Pietropaolo)

What to look for

1. Lighting

Is lighting of common areas such as corridors, entrances, elevators and stairwells adequate (i.e. between .5 and 1 footcandle, according to the Ontario Building Code)? Are areas of shadow avoided through use of more lighting fixtures?

2. Sightlines

Do key routes, such as the ones from parking and laundry room to elevators, provide clear sightlines? Is the lobby visible from the interior of the building or the street? Would use of transparent materials and security mirrors improve sightlines?

3. Elevator sightlines

Is the interior of an elevator mirrored or does it have an angled mirror if the entire interior area is not visible to a person about to enter?

4. Location of activity generators

Are activity generators such as party rooms and laundry rooms near entrances to make both spaces safer?

5. Informal surveillance of laundry room and play areas

Can laundry rooms be viewed from the street, the entrance, or some other source of informal surveillance? Are outdoor play areas visible from apartments, preferably from kitchens or living rooms?

6. Locking devices

Are interior door locks at least a one inch (25 mm) dead-bolt? Are glass panels near doors reinforced or eliminated? Are windows lockable from the inside? Are French doors equipped with bars? Do garden gates lock? Are door locks changed every time there is a change in tenants?

7. Formal surveillance

Will superintendents, maintenance staff, or residents patrol halls, parking garages or lots, and other common areas? Do they know how to report maintenance problems and how to respond in an emergency?

See also: lighting, sightlines, entrapment spots, isolation, signage.

4.2.6 SCHOOL YARDS

The Problem

School yards have been the site of a number of sexual assaults in the Toronto area. Unfortunately, many school yards have environmental characteristics which make a place less safe: they are off a major pedestrian route, deserted after school hours, relatively isolated, often fenced in with few escape routes and not visible from the street.

What to look for

1. Location of school yards

Are school yards entirely visible from the street, rather than tucked behind the school?

2. Formal surveillance

Is there supervised recreation after school hours? Are there security patrols?

3. Intensification of land use

Is it possible to incorporate other activities, like community gardens or bocci/handball courts, to bring people into the school yard in off-hours?

4. Locking and signage

After dark or when yards are not supervised, are yards locked and signage placed that states the penalties for trespassing?

See also: intensification of use, parks.

CENTRAL BUSINESS DISTRICT 4.3.1

The Problem

The concentration of business in downtown areas and the resultant loss of grade-level housing and commercial functions has been a feature of North American and European cities in the late twentieth century. While very busy during the working day, the Central Business Districts often become deserted after dark. This has security implications, not only for the hidden army of night workers including cleaners, hospital workers, waiters, and other service staff, but for the many office and service workers who work overtime, as well as people enjoying entertainment functions found in the Central Business District.

Making the Central Business District more secure is a problematic proposition. Adding a few isolated residential buildings would only serve to make their inhabitants less secure. The large scale condominium-type developments favoured downtown are also of limited value, since the informal surveillance potential of someone living on the twentieth floor with an excellent view of the lake is low. Further, these projects often fortify themselves from the surrounding area. Mixed-income medium density housing downtown has been recommended by the majority of women's groups to comment upon this matter (Montreal, Quebec City, Hull, Toronto, Amsterdam, Manchester), but there are economic barriers to the realization of this goal.

What to look for

1. Informal surveillance through generating street-related evening activity

Do commercial buildings have retail street frontages? Are commercial uses that are open late such as restaurants and theatres encouraged at street level? Do these retail uses have glass walls fronting main streets or are there sidewalk patios adjacent to the street? Are street vendors and street entertainers encouraged in the CBD?

2. Reduction of entrapment spots

Are plazas and parks in the CBD at street level, rather than below or above grade? Are alleyways and loading docks well-lit? Can they be fenced at night or when not in use?

3. Land use mix - residential

Are there mixed-income housing units with appropriate services in the CBD?

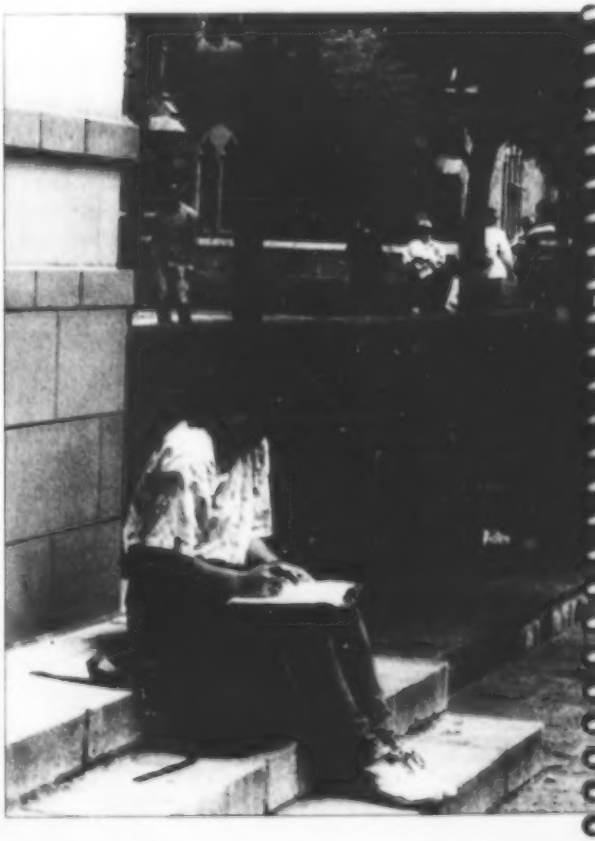
See also: entrapment spots, land use mix, intensification of land use.

Harbourfront LRT Entrance, Queen's Quay at Bay Street: stairways leading down, overhead walkways crossing the street and no ground-level stores on this side of the street. It is not surprising that the sidewalks are deserted along this route to the Island ferry.
(Photo: V. Pietropaolo)

4.3.2 DOWNTOWN PARKS AND OPEN SPACE

The Problem

Toronto's downtown has a high proportion of parks and open spaces that "work" from a safety and security point of view: open space that is highly used during peak periods and does not become "dead space" when there is less activity (e.g. The Sculpture Garden, St. James Park, Berzcy Park in the downtown). However, there are some open spaces that have the opposite effect: avoided even during the lunch hour, these open spaces become avoidance areas after dark.



Nathan Phillips Square; Bell Canada Square; Steelworkers Park: the most successful downtown open spaces are flexible: offer a choice of sun and shade, places to sit outdoors and eat lunch, places to see and be seen, and places to enjoy summer entertainment, such as music and comedy.

The least successful places are inflexible, right down to the benches; they are hidden from the action instead of being part of it, and lack visibility, a factor that is important, even at midday.
(Photos: V. Pietropaolo)

DOWNTOWN PARKS AND OPEN SPACE 4.3.2

What to look for

1. Lighting

If the park is intended for night use, are the paths and potential entrapment areas lit to street level?

2. Sightlines

Can you see in the park from the street or surrounding office buildings? Are landscape elements chosen and maintained so that they do not block sightlines from the street, along paths or from light fixtures?

3. Range of activities

Are downtown parks planned for a range of activities, even if they are intended, in the main, for passive use?

Berczy Park in downtown Toronto, a grassy knoll used mainly for picnic lunches, has space for a bandstand. Including space for formal activities becomes more important as the space becomes more complex. Space for buskers and street vendors, picnic tables, and supervised washrooms are some of the spaces that downtown workers might appreciate. The ability of the public to comment on their downtown park needs should continue to be accommodated in the planning.

4. Formal surveillance

Will park attendants or the Metro Toronto Police Force provide formal surveillance? If there are park attendants, what are their hours and are they trained to respond in an emergency?

5. Fencing

If no formal activities or surveillance can be provided after work hours, are downtown parks fenced and closed after dark?

6. Food kiosks

Does the design allow for the incorporation of small food kiosks to attract users?

See also: lighting, sightlines, elimination of entrapment spots, reduction of isolation, land use intensification.

4.3.3 DOWNTOWN COMMERCIAL/OFFICE DEVELOPMENTS

The Problem

The typical building in most North American downtowns is an office building with one or more floors of shopping on the first floor or basement. While busy during the day, these can be very isolated environments for people working late (including people working in stores with late hours, office workers, and night cleaning staff). The isolation of front-line staff, such as receptionists, from interior offices can also be of concern to these staff people.

What to look for

1. Formal surveillance

After regular work hours, does management monitor who enters an office building? Do parking garages used by large companies provide designated parking spaces near an attendant or escort services for people who will be working late and who may have security concerns? Are offices connected directly to security staff? Do security staff know how to respond in emergencies?

2. Clustering stores that are open late

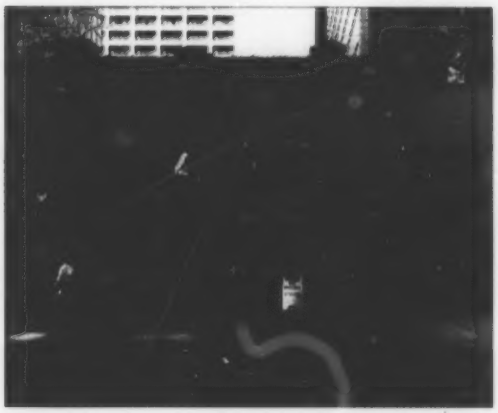
Are stores that open late near the entrance of the building so that these activities will gain greater security through being clustered?

3. Receptionist area

Can the receptionist have clear sightlines of the approach to his or her work station from the door? Is the receptionist connected to security staff or other workers in case of an emergency?

4. Washroom access

Is washroom access limited by a key system?



Entrance to Bardi's Restaurant, Adelaide at York; Bay Street at Queen's Quay West; Alleyway off York Street: Too much of the Central Business District turns its back to the street. More restaurants with views to the street, more stores and residences using a street-level entrance, and less "dead space" would make a relatively safe downtown into an even safer and more secure precinct.
(Photos: V. Pietropaolo)

INDUSTRIAL AREAS 4.4.1

The Problem

Industrial areas become virtually deserted after work hours. Public transit is often poor as well. There is little provision for the safety and security of workers in industrial areas.

Yet these are often the areas where women are employed in occupations involving shift work. These areas are also dangerous because of numerous service alleyways, docks, and general untidiness of related activities.

It is even more difficult to encourage mixed use development in industrial areas than the CBD, due to the City of Toronto's policy regarding preservation of industrial areas, as well as the potential environmental hazards of building housing on land that was formerly used by heavy industry.

What to look for

1. Lighting

Is pedestrian-scale lighting along streets and entrance paths to buildings at an equal quality to commercial and residential areas? Is lighting focussed to illuminate entrapment areas such as the entrances to loading docks? Is there signage that encourages reporting of burnt-out or vandalized lights?

2. Sightlines

Are parking lots, the paths to parking lots, and transit stops visible from the buildings which they serve? Is the parking lot visible from the street?

3. Land use mix, intensification of activity

Are there activities that could bring in a steady enough stream of people to make this area less isolated?

4. Formal surveillance

Can parking lots and transit stops be made visible from the work stations of building security personnel? Can an escort service or buddy system be created for late-night staff? Can buses, cabs and other vehicles with radios be used to help keep an eye on the area?

See also: lighting, isolation, land use mix, intensification of land use, surface transit stops.

4.4.2 ALLEYS AND LANEWAYS

The Problem

Laneways are often isolated spots, poorly lit and maintained. There have been a number of complaints to the Safe City Committee from women who do not feel comfortable parking in laneways after dark. Laneways that lead off busy streets are often non-continuous, poorly lit and maintained, making them ideal entrapment spots.

What to look for

1. Lighting

Is lighting of laneways off main streets at the same quality as the street lighting?

In the case of public laneways, this is the responsibility of the municipal government. In the case of private laneways, the owner is responsible.

3. Sightlines/avoiding entrapment

Are laneways straight, with more than one entrance?

Laneways that take a sharp turn should be equipped with angled mirrors. Laneways that dead-end should be avoided, when possible. Existing dead-end laneways can be sometimes extended as part of a redevelopment.

3. Maintenance

Is maintenance of public and private laneways strictly enforced?

Of particular concern are abandoned cars and open garages and sheds in laneways.

4. Intensification

Where housing and work sheds can be built in laneways, is the entrance of laneway housing visible from the street, or failing that, from the windows of other buildings?

Work sheds should be allowed only if they can be closed and secured after work hours.

5. Changing use of laneways

Is it possible to transform laneways into pedestrian streets or linear parks?

This may be impossible in many cases.

See also: lighting, sense of ownership/ maintenance, intensification of land use.

Café, Yorkville: a small café courtyard livens up a laneway in this midtown commercial district. laneways that are often used as shortcuts can be transformed into "pedestrian streets", with the co-operation of neighbouring businesses.
(Photo: V. Pietropaolo)

WASHROOMS 4.4.3

The Problem

Public washrooms (i.e. those in parks and community centres directly or indirectly owned by the City), and washrooms used by the public (according to the Ontario Health Code, commercial establishments such as restaurants and department stores must allow 'customers' to use their washrooms), are often located in inconvenient locations, are poorly signed, and are avoided by some members of the public because of security concerns. If people are using other places to relieve themselves, this of course reinforces a negative image.

High Park: a public washroom, near the High Park Avenue entrance of this regional park. Unfortunately, there are no signs leading you to the washroom, and only a very small sign indicating that there is a public telephone in the building. This hardly encourages use of the amenity. (Photo: V. Pietropaolo)

What to look for

1. Activity generators

Is it possible to bring other activities to the washrooms?

Emergency or regular telephones should be near washrooms. Other activities which might encourage use at or around washrooms include baby-changing tables, baby nursing stations, vending machines, and places to rest.

2. Attendants

Where washrooms are especially necessary and especially unsafe, are there washroom attendants?

3. Locks

While individual stalls should be lockable, outer doors should not be lockable without a custodian's key, in order to reduce the danger of entrapment.

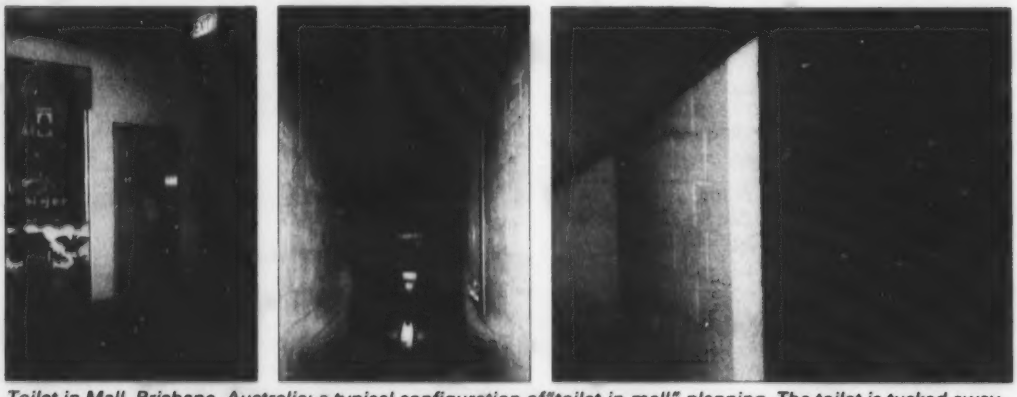
4. Sightlines

Are approaches highly visible so that people cannot loiter or sneak in? The entrances to washrooms near playgrounds should be visible from the playgrounds.

5. Maintenance

Is vandalism and graffiti regularly cleaned?

The quality of finish, maintenance, amenities and hot water are all important to a pleasant and safe-feeling toilet. Toilets are often abused because they are unhygienic.



Toilet in Mall, Brisbane, Australia: a typical configuration of "toilet-in-mall" planning. The toilet is tucked away in a corner of the mall, accessed through an isolated corridor. Just off the entrance to the toilet is fire exit, which provides an ideal entrapment spot. (Photos: C. Whitzman)

REFERENCES

[1] Margaret Gordon and Stephanie Riger, *The Female Fear* (New York: The Free Press), 1989.

[2] eg., Nottingham Safer Cities Project, *Community Safety in Nottingham City Centre: Report of the Steering Group* (Nottingham, UK: Nottingham Safer Cities Project), October 1990.

[3] Solicitor General of Canada, "Female victims of crime", Bulletin 4, *Canadian Urban Victimization Survey*, 1985.

[4] Julie Brickman and John Briere, "Incidence of rape and sexual assault in an urban Canadian population", *International Journal of Women's Studies*, Volume 7(3), p. 194-206, 1984; *Canadian Urban Victimization Survey*.

[5] *Canadian Urban Victimization Survey*.

[6] Gordon and Riger, 1989.

[7] Metro Toronto Task Force on Public Violence Against Women and Children, *Final Report of the Subcommittee on Urban Design*, (Toronto: Task Force), 1984; Francis Stoks, *Assessing Urban Public Space Environments for Danger of Violent Crime – Especially Rape*, (University of Washington: unpublished Ph.D. dissertation), 1982.

[8] eg., Alice Coleman, *Utopia on Trial: Vision and Reality in Planned Housing*, (London: Hilary Shipman), 1985.

[9] eg., Barry Poyner, *Design Against Crime*, (Cambridge: Cambridge University Press), 1983.

[10] Toronto Transit Commission (TTC), Metro Action Committee on Public Violence against Women and Children [METRAC], Metro Toronto Police Force [MTPF], *Moving Forward: Making Transit Safer for Women*, (Toronto: Toronto Transit Commission), 1989; TTC, METRAC, MTPF, City of Scarborough, Scarborough Women's Action Network, *Making Transit Stops Safer for Women: Scarborough Moves Forward*, (Toronto: Toronto Transit Commission), 1991.

[11] METRAC, Women Plan Toronto, York University Faculty of Environmental Studies, *The WISE (Women in Safe Environments) Report*, (Toronto: METRAC), 1987.

[12] Jane Jacobs, *The Death and Life of Great American Cities*, (New York: Vintage Books), 1961; Dolores Hayden, *Redesigning the American Dream: The Future of Housing, Work, and Family Life*, (Cambridge, USA: MIT Press), 1984.

[13] Stoks, 1982.

[14] Metro Toronto Task Force, 1984.

[15] Stoks, 1982.

[16] egs., Brian Anson, "Removing walkways is not nearly enough" in *Town and Country Planning*, Volume 55(6), pp. 174-175, 1986; Vron Ware, *Women's Safety on Housing Estates*, (London: Women's Design Service), 1988.

[17] Stoks, personal communication, 1990.

[18] Kate Painter, *Lighting and Crime Prevention: The Edmonton Project*. U.K. Middlesex Polytechnic. 1988.

[19] METRAC, *Planning for Sexual Assault Prevention: Women's Safety in High Park*, (Toronto: METRAC), 1989.

[20] Oscar Newman, 1972.

[21] Alice Coleman, 1985.

SAFETY AND SECURITY CASE FILE [redacted]

In order to improve the Department's knowledge base, we are asking you to contribute examples of personal safety problems and solutions that you have worked on. These files will be used by the Safe City Committee to revise this working guide, as well as to plan research and workshops on common problems. Please take the time to fill out these forms, then return them to:

Carolyn Whitzman, Safe City Committee, 20th Floor, East Tower, City Hall, Toronto, M5H 2N2.

1. **Location of site:** _____

2. **Identified problem(s):** _____

3. **Process for dealing with problem(s):** _____

4. **Suggested solution(s):** _____

5. **Improvements made (when):** _____

6. **Was there any formal evaluation of these improvements? Should there be? Suggested means of evaluation:** _____

7. **Other comments:** _____

8. **Documentation - please attach sketches or photographs**

Contributor: _____

Start date of file: _____ **Close date of file:** _____

EVALUATION OF WORKING GUIDE

This working guide is the first of its kind, not only for the City of Toronto, but for any city's planning department. We need to know how to revise this guide for future editions. Please help us by referring to it over a six month period, then returning this form anonymously to:

Carolyn Whitzman, Safe City Committee, 20th Floor, East Tower, City Hall, Toronto, M5H 2N2.

1. On the whole, how useful did you find this working guide?

- ☐ **very useful**
- ☐ **quite useful**
- ☐ **not very useful**

2. What sections did you refer to most often?

_____

_____

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3. What sections did you refer to least often?

_____

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_____

4. What additions, changes or deletions would you make to a second edition?
(add additional pages as neccessary)

_____

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5. Other comments:

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RESOURCES ON PLANNING AND DESIGNING SAFER URBAN ENVIRONMENTS

City of Toronto Directives re: Safety

City of Toronto. *Section of the Housing By-law regarding storage garages in multiple occupancy dwellings*. Adopted in 1989.

City of Toronto Planning and Development Department. *Cityplan Proposals Report*. November 1991.

_____. *Design Guidelines for Underground Tunnels*. 1990.

_____. *Planning for a Safer City*. Cityplan Background Report no. 10. October 1990.

City of Toronto Safe City Committee. *The Safe City: Municipal Strategies for Preventing Public Violence Against Women*. September 1988.

_____. *A Safer City: the Second Stage Report of the Safe City Committee*. October 1991.

Background - Crime, Fear of Crime

Charland, Janine. *Women's Personal Security, Fear of Crime, and the Urban Environment*. Master's Major Paper, Faculty of Environmental Studies, York University, Toronto, Canada, 1988.

Charland, Michele. *Les Femmes et la Securité dans l'Environnement Urbain*. Montreal: Information ressources Femmes et logement, 1990.

Gordon, Margaret et al. "Crime, women, and the quality of urban life" in *Signs: Journal of Women in Culture and Society* (5) 3 suppl., pp. S144–160, 1980.

Gordon, Margaret and Stephanie Riger. *The Female Fear*. New York: The Free Press, 1989.

Grant, Ali. *Women and Public Urban Space: Women's Freedom of Movement in the City of Toronto*. Master's Thesis, Department of Geography, University of Toronto, 1988.

Home Office Standing Conference on Crime Prevention [UK]. *Report of the Working Group on the Fear of Crime*. December, 1989.

Kirk, Nana Lynn. *Factors Affecting Perceptions of Social Safety in Public Open Space*. Master's Thesis, Landscape Architecture, University of Illinois at Urbana, Champaign, USA, 1989.

Macleod, Linda. *The City for Women: No Safe Place*. Ottawa: Secretary of State Canada, October, 1989. Prepared for the European & N. American Conference of Urban Safety & Crime Prevention.

_____. *Freedom from Fear: A Woman's Right, A Community Concern, A National Priority*. Ottawa: Secretary of State Canada, March, 1991.

Metro Action Committee on Public Violence Against Women and Children, Women Plan Toronto, York University Faculty of Environmental Studies. *The Women in Safe Environments (WISE) Report*. Toronto: METRAC, 1987.

Metro Toronto Task Force on Public Violence Against Women and Children. *Final Report of the Subcommittee on Urban Design*. Toronto: Metropolitan Toronto, 1984.

Smith, Michael. "Women's fear of violent crime: an exploratory test of a feminist hypothesis" in *Journal of Family Violence*, (3)1, pp. 29–38. 1988.

Smith, Susan. "Fear of crime: beyond a geography of deviance" in *Progress in Human Geography* (11)1, pp. 1–23. 1987.

Solicitor General of Canada. *Canadian Urban Victimization Survey*. Bulletin no. 4: "Female Victims of Crime". Ottawa: Solicitor General Canada, 1985.

Stoks, Francis. *Assessing Urban Public Space Environments for Danger of Violent Crime – Especially Rape*. Ph.D. dissertation, University of Washington, 1982.

Whitzman, Carolyn. *Women, Fear and Urban Neighbourhoods*. Master's Thesis, Department of Geography, University of Toronto, Canada. 1988.

Women Plan Toronto. *Shared Experiences and Dreams: Implications for City Planning* Report from a workshop. Toronto: 1985.

Planning Process

Bulos, M. "Issues of Research, Policy and Implementation" in summary of papers from conference *Women & their Built Environment*. London, UK. 1988.

Farish, Maureen. "How do you ask women what they want?" in summary of papers from conference *Women & their Built Environment*. London, UK. 1988.

London Planning Advisory Service. *Planning for Women: An Evaluation of Consultation in Three London Boroughs*. London: 1987.

Riley, Kath. "Formulating & implementing policies for women" in summary of papers from conference *Women & their Built Environment*. London, UK. 1988.

Sarre, Rick. "The evaluation of crime prevention projects: Issues for local government". Workshop for Local Government: Creating Safer Communities Conference. Melbourne. November 1991.

Crime Prevention Through Environmental Design - General

Bell, Wendy. "The planning role in creating safer communities". Abstract of paper prepared for *Local Government: Creating Safer Communities*, Australian Institute of Criminology Conference. November, 1991.

Canada Mortgage and Housing Corporation. *Evaluation of Window Guards for Resistance to Forced Entry*. June, 1983.

Coleman, Alice. *Utopia on Trial: Vision and Reality in Planned Housing*. London: Hilary Shipman, 1985.

Cooper Marcus, Clare and Carolyn Francis. *People Places: Design Guidelines for Urban Open Space*. New York: Van Nostrand Reinhold, 1990.

Council of Europe. *Local Strategies for the Reduction of Urban Insecurity in Europe*. Proceedings from Standing Conference of Local & Regional Authorities of Europe (No. 35) Strasbourg. 1989.

European and North American Conference on Urban Safety and Crime Prevention. *Briefing Books and Agenda for Safer Cities*. Montreal. October, 1989.

Falanga, Mark. "Pre-construction evaluation techniques for reducing environmentally related crime" in *Design Methods and Theories* (21)4, pp. 717–722. 1987.

Geason, S. and Wilson, P. *Designing out Crime: Crime Prevention Through Environmental Design*. Canberra: Australian Institute of Criminology, 1989.

Government of Australia. *Local Government: Creating Safer Communities, Report on National Conference* (draft). Melbourne. December, 1991.

Jacobs, Jane. *The Death and Life of Great American Cities*. New York: Random House,1961.

METRAC. *Developing a Safe Urban Environment for Women: Discussion Paper*. Toronto. October, 1991.

Newman, Oscar. *Defensible Space*. New York: Macmillan, 1972.

Pacquette, Deborah. "In-service training" in *WEB: Women and the Built Environment*. Spring/Summer 1991.

Painter, Kate. *Lighting and Crime Prevention: The Edmonton Project*. UK Middlesex Polytechnic. 1988.

Rubenstein, Herb, Charles Murray, Tetsuro Motoyama, W.V. Rouse. *The Link Between Crime and the Built Environment*. Washington, D.C.: The Law Enforcement Assistance Administration, National Institute of Justice. July 1980.

"Planning out the Criminals" (Special Issue) in *Town and Country Planning* (55)5. May, 1986.

Trench, Sylvia, Taner Oc and Steven Tiesdell. "Safer cities for women – perceived risks and planning measures". Institute of Planning Studies, University of Nottingham, UK. 1991.

Valentine, Gill. "Women's Fear and the Design of Public Space" in *Built Environment* (16)4, pp. 288–303. 1990.

Waller, Irvin. *Current Trends in European Crime Prevention: Implications for Canada*. Ottawa: Department of Justice. 1989.

Women's Design Service (London, U.K.). *At Her Convenience*. 1990.

Work from Other Cities on Crime Prevention Through Environmental Design

Amsterdam Physical Planning Department. *Physical Planning and the Emancipation of Women*. May, 1985.

Armitage, Barbara. "The local government role in crime prevention". Paper presented at Local Government: Creating Safer Communities Conference. Melbourne. November, 1991.

Brisbane City Council. *Safety Audits: Making Your Community Safer*. n.d.

Dubrow, Gail Lee et al. "Planning to end violence against women: notes from a feminist conference at UCLA" in *Women and Environments*, Volume 8(2), 1986, pp. 4–9.

Greater London Council Women's Committee. *Changing Places: Positive Action on Women and Planning*. 1986.

Halton Regional Police. *Crime Prevention Through Environmental Design Manual*. May, 1986.

Home Office Crime Prevention Unit. *Safer Cities Progress Report 1989–1990*. London, U.K. 1990.

_____. *Safer Cities Progress Report 1990/1991*. London, U.K. 1991.

_____. *Safer Communities: The Local Delivery of Crime Prevention Through the Partnership Approach* prepared for Standing Conference on Crime Prevention. London, UK. 1991.

Islington Safer Cities Project. *Women and Safety in Islington*. Islington, U.K. 1990.

Kendrick, Tim. "Creating safer neighbourhoods: the British experience." Presentation for Local Government: Creating Safer Communities Conference. Melbourne. November 1991.

London Borough of Haringey. *A Guide for Developers: Towards a Safer Environment*. 1987.

London Borough of Hornsey. "Notes on other LBs work on safety". n.d.

London Borough of Wandsworth. *Planning Design Guidelines: Personal Safety and Security*. 1986.

Manchester City Planning Department. *Planning a Safer Environment for Women*. Manchester, UK: City Planning Department, 1987.

Merry, Sally. "Defensible space undefended: social factors in crime control through environmental design" in *Urban Affairs Quarterly* (16)4, pp. 397–422. June 1981.

Ministry of Housing, Physical Planning and the Environment. *Urban Planning and Community Safety*. The Hague, Netherlands: Ministry of Housing, Physical Planning and the Environment. 1986.

National Committee on Violence [Australia]. *Violence: Directions for Australia*. Canberra: Australian Institute of Criminology. 1990.

National Safe Neighbourhoods [NACRO]. *Crime Prevention and Community Safety: A Practical Guide for Local Authorities*. London. February 1989.

Nottingham Safer Cities Project. *Community Safety in Nottingham City Centre*. Report of the Steering Group. 1990.

_____. *Action Plan 1990/91*. 1990.

Rand, George. *Crime and Environment: An Approach for Los Angeles*. Urban Innovations Group, University of California in Los Angeles. 1983.

Tandem Montreal. *Par le Trou de la Serrure* (review in French of some European and North American safe city initiatives) (2)1. Montreal. November 1991.

Trench, Sylvia and Sallie Jones. "Planning for the Safety of Women in Cities". AESOP Congress, Reggio Calabria. November 1990.

Wandsworth Safer Cities Project. *Progress Report and Action Plan 1991/92*. Wandsworth, U.K.: 1991.

West End Forum Project. *Final Report*. Melbourne, Australia: City of Melbourne. December 1991.

Whitzman, Carolyn. "Letter from the Netherlands". *Women and Environments*, Vol. 11 (3/4), Spring/Summer 1989, pp. 14–15.

Winnipeg Police Department. *Crime Prevention Environmental Design Guidelines: A Qualitative Checklist*. n.d.

Winnipeg Social Planning Council. *A Safer Winnipeg for Women and Children*. Winnipeg, 1991.

Safer Transportation

Atkins, S.T. "Personal security as a transport issue: a state of the art review" in *Transport Reviews* (10)2, pp. 111–125. 1990.

Brewer, Maureen & Carol Davis. "Making transport facilities meet women's needs" in summary of papers from conference *Women & their Built Environment*. London, UK. 1988.

Charland, Janine. "Security and design: the case of the Heath Exit of St. Clair West subway station". Research paper, York University, Toronto, Canada. 1986.

EnTRA Consultants. "Security of Women on GO Transit: Proposal". Toronto. July 1991.

George Rand Associates. *Crime Analysis of SCRTD Metro Rail Project: Technical Report*. Los Angeles, U.S. 1984.

Gibson, Catherine. "Towards a safer urban environment for women". Research paper, York University, Toronto, Canada. 1982.

Greater London Council Women's Committee. *Women on the Move: GLC Survey on Women and Transport* (9 volumes). 1984–1987.

Levine, Ned and Martin Wachs. *Factors Affecting the Incidence of Bus Crime in Los Angeles*. Washington, D.C.: U.S. Department of Transportation, Urban Mass Transportation Administration. January, 1985,

"Easing women's travel fears: a suitable case for special treatment?" *Local Transport Today*. October 17, 1990.

London Borough of Hackney. "Hackney mini-cab scheme". February, 1991.

Lynch, G. and S. Atkins. "The influence of personal security fears on women's travel patterns". UTSG Conference, Sheffield University. January, 1987.

Ohlenschlager, Susie. "Women also travel" eds. Trench, Sylvia and Taner Oc. *Current Issues in Planning*. Brookfield, VT: Gower. 1990.

Public Transportation Corporation (Melbourne Aus) package of materials on TravelSafe Program and safety audits of stations. 1991.

Spring, Geoff (Melbourne PTC). "Public transport safety: a community right and communal responsibility". Paper presented at conference *Local Government: Creating Safer Communities*. Melbourne, Australia. November 1991.

Toronto Transit Commission. "Designated waiting area: A test project". n.d. (pamphlet).

_____. "Your TTC: A User's Guide". n.d. (pamphlet)

Toronto Transit Commission (TTC), METRAC, Metro Toronto Police Force (MTPF). *Moving Forward: Making Transit Safer for Women*. Toronto: TTC. 1989.

TTC, METRAC, MTPF, City of Scarborough, Scarborough Women's Action Network. *Making Transit Stops Safer for Women: Scarborough Moves Forward*. Toronto: TTC. 1991.

Van Wijk, Josephien. *From Structure Plan to Realization of Station Sloerdijk: Social Safety in Practice*. Amsterdam, Netherlands, Physical Planning Department. April 1986.

Safer Housing - Design

Anson, Brian. "Removing walkways is not nearly enough" in *Town & Country Planning*, 55(b), pp. 174–175. 1986.

_____. "Battling for the right to design their homes" in *Town & Country Planning* (56)3, pp. 69–70. 1987.

Avery, Hinda. "Safe housing for women: Mavis/McMullen Place" from *WEB: Women and the Built Environment*. 1989.

_____. "Sitka Housing Co-operative: women house themselves" in *Women and Environments* (11)2, pp. 19–21. Winter 1989.

Black and Moffat Architects. *Toward Drug Resistant Urban Housing: Report of a Literature Search*. Report prepared for Moss Park Community Development Project, Toronto, Canada. December 1990.

Canada Mortgage and Housing Corporation. *Overview of CMHC Activities Related to Urban Safety and Crime Prevention*. Ottawa, CMHC. Prepared for the European and North American Conference on Urban Safety and Crime Prevention. October 1989.

_____. *A Synthesis of International Literature on Urban Safety and Crime Prevention in Residential Environments: interim report and bibliography*. Ottawa, CMHC. Prepared for the European and North American Conference on Urban Safety and Crime Prevention. October 1989.

Coleman, Alice. "Design improvement: utopia goes on trial" in *Town and Country Planning* (55)5, p. 138. 1986.

Cooper Marcus, Clare and Wendy Sarkissian. *Housing as if People Mattered: Site Design Guidelines for Medium-Density Housing*. Berkeley: University of California Press, 1986.

Linden, Rick and Prairie Research Associates Inc. *Crime Prevention and Urban Safety in Residential Environments: Final Report*. Ottawa, CMHC. March 1990.

London Borough of Haringey. *Safety by Design: Borough Initiatives in Housing Design with Particular Reference to the Safety and Security of Women*. June 1987.

London Borough of Southwark. *Housing Security Design Guide*. December 1985.

Markesteyn, Sharon. *Women and Safety in Bathurst Quay: A Toronto Harbourfront Neighbourhood*. Current issues paper for Bathurst Quay Neighbourhood Security Committee and University of Toronto Planning Department. April 1991.

Meredith, Colin. *Apartment Crime Prevention Project: Report of Research Findings*. Ottawa, Solicitor General Canada, No. 1988–09, User Report. 1988.

Moughtin, JC and Art Gardner. "Towards an improved and protected environment" in *The Planner*. June 1990.

Rainwater, Lee. "Fear and the house-as-haven in the lower class" in *AIP Journal*, 1966.

Safe Neighbourhoods Advisory Unit. *Progress Report 1981-1986*. London, 1986.

_____. *Safer Neighbourhoods: Re-designing Housing Developments to Reduce Crime and Enhance Community Safety*. York, UK: University of York, Institute of Advanced Architectural Studies. December 1989.

Vogel-Heffernan, Mary. "Designing battered women's shelters". *Women and Environments Magazine* (8)2, p. 7. Spring 1986.

Ware, Vron. "Problem with design improvements at home" in *Town and Country Planning* (56)10, pp. 264-266. October 1987.

_____. *Women's Safety on Housing Estates*. London: Women's Design Service, 1988.

Whitzman, Carolyn. "Community and design: against the solution in St. James Town" in *City Magazine* (11,1, pp. 32–36. Summer/Fall 1989.

_____. "Safety and housing design: some big questions". Notes for workshop, Fall 1989.

Safer Housing - Community Crime Prevention

"Women and Housing" (Special Issue). *Canadian Women's Studies* (11)2. Fall 1990.

Eagan, Andrea Boroff. "The Girl in 1-A: sexual harassment hits home", *Mademoiselle* April 1987.

Heitner, Lois. *Constance Hamilton Co-op: The Evolution of a Women's Housing Co-op*. Research Paper, OISE, Toronto, Canada. 1988.

Jim Ward Associates. *Moss Park Community Development Project: Community Consultation Report*. Toronto. February 1991.

London Housing Unit. *Guidelines for Dealing with Racial and Sexual Harassment in Temporary Accomodation*. n.d.

Mayor's Task Force on Drugs. *Report of the Neighbourhood Action on Drugs Forum*. Toronto, Canada. October 1989.

Metro Toronto Housing Authority *Homewords*. February 1991.

National Action Committee on the Status of Women Housing Committee. *Women and Housing: Creating Solidarity*. Toronto. February 1991.

Neighbourhood Watch. *A Secure Lifestyle* and various pamphlets. nd

Ontario Non-Profit Housing Association. *Access for Women Who Are Experiencing Violence* (Report 91–02). July 1991.

Pettersson, Geraldine. "Safety on estates and other problem areas" in summary of papers from conference *Women & their Built Environment*. London, UK. 1988.

Rao, Nirmala. "Public housing: inequal opportunities" in *WEB: Women and the Built Environment*. Winter 1990.

Sanford, Barbara. *St. James Town Revitalization: Social Analysis*. Toronto, Canada: City of Toronto Planning and Development Department. May 1988.

Shearing, Clifford. *MTHA Security Delivery System: A Blueprint for Change: The Lessons of the Pilot Projects*. Toronto. Prepared for the Metropolitan Toronto Housing Authority. August 1989.

Solicitor General Canada. *The Good Neighbours Crime Prevention Handbook*. Ottawa: Solicitor General Canada. 1983.

Starr Group. *City of Toronto Supportive Housing Study: Final Report*. Toronto, May 1991.

Unger, Donald and Abraham Wandersman. "The importance of neighbours: the social, cognitive, and affective components of neighbouring" in *American Journal of Community Psychology* (13)2, pp. 139–169. 1985.

Vergara, Camilo. "New York's new ghettos" in *The Nation*, June 17, 1991, pp. 804–810.

Ward, Jim. *Report of the St. James Town Anti-Drug Community Support Pilot Project* and interim reports prepared for the Mayor's Task Force on Drugs. Toronto, Canada. September 1991.

Wekerle, Gerda and Sylvia Novac. *Gender and Housing In Toronto*. Women and Work Institute, Equal Opportunity Division, City of Toronto. June 1991.

"Women and Safety on Estates: Impact of the (UK) Housing Bill". n.d.

Safer Parks and Urban Open Space

Andropogon Associates. *Landscape Management and Restoration Program for the Woodlands of Central Park*. Report for Central Park Administration, New York City. October 1989.

The Design of Neighbourhood Parks. Baltimore, US: City Planning Commission. n.d.

Burgess, Jacquelin, Carolyn M. Harrison and Melanie Limb. "People, parks and the urban green: a study of popular meanings and values for open spaces in the City" in *Urban Studies* (25), pp. 455–473. 1988.

Burlakow, Klaus. *Concerns Regarding Problems of Violence and Vandalism: submission to Winnipeg Parks Department*. Winnipeg. March 1990.

Campbell, Angela, Margaret Armstrong & John McKechnie. *Every Picture Tells a Story: Regeneration in Woodlands Area*. Glasgow, UK: Safe Castlemilk. 1991.

Citizens Taskforce on the Use and Security of Central Park. *Central Park: The Heart of the City*. New York City, US: Central Park Conservancy. March 1990.

City of Toronto Planning and Development and Parks and Recreation Departments. *Green Spaces/ Safer Places: A Forum on Planning Safer Parks for Women*. Toronto, April, 1991.

Cranz, Galen. "Women in urban parks" in *Signs: Journal of Women in Culture and Society* (5)3 suppl., pp. 579-595. 1980.

Dandavino, Rita Rachele. "Safety and security in Mount Royal Park Montreal: case study". Presented at Green Spaces/Safer Places: A Forum on Planning Safer Parks for Women, Toronto, Canada. September 1990.

Egan, Jo-anne and Mark Gladysz. "More than trees, parks and benches: understanding the complex life of downtown parks" in *City Planning*, 43–45. Summer 1988.

Francis, Mark. "Urban open spaces" eds. Zube, E.H. and G.T. Moore, in *Advances in Environment, Behavior, and Design*. New York: Plenum Press. 1987.

"Whatever became of the public square?" *Harper's Magazine*, pp. 49–60. July 1990.

Harrison, Carolyn and Jacquelin Burgess. "Living spaces" in *Landscape Design*. September 1989, pp. 14–16.

Landscape Architectural Review (12)2. (Special issue on parks safety). July 1991.

METRAC. *Planning for Sexual Assault Prevention: Women's Safety in High Park*. Toronto. October 1989.

Mozingo, Louise. "Women and downtown open spaces" in Places: *A Quarterly Journal of Environmental Design* (6)1, pp. 38–47. Fall 1989.

New York City Parks and Recreation Department. "Junior Ranger Naturalist Program". n.d. (pamphlet)

_____. "New York Road Runner's Club Safety Program for Central Park". n.d. (pamphlet)

_____. "Safety Tips for Central Park". n.d. (pamphlet)

Orsini, David. *Mitigating Fear in the Landscape: Recommendations for Enhancing Users' Perceptions of Safety in Urban Parks*. Master's Thesis, Landscape Architecture, University of Guelph, Canada. 1990.

Thomas, Suzy. *Allen Gardens Revitalization Study*. Design Thesis, Landscape Architecture, University of Guelph, Canada. 1991.

Safer Urban Cores

Bell, Wendy. *Urban Design and Crime Prevention in the Adelaide CBD*. Prepared for the Crime Prevention and Criminology Unit, South Australia Attorney-General's Department for the Inner City Co-operative Action Group. January 1991.

City of Melbourne and the Victorian Government. "Melbourne's westend nightspots: safe enjoyment for everyone: a code of practice". Australia. 1991. (pamphlet)

City of Toronto. "Underground Garages: guidelines for owners and users". n.d. (pamphlet)

Landry, Charles and Ken Worpole. "Revitalising public life" in *Landscape Design*. April 1991.

Minneapolis Department of Regulatory Services. "Guidelines for existing parking ramp facilities and new construction". n.d.

Project for Public Spaces (New York City, U.S.). *Managing Downtown Public Spaces*. Chicago: Planners Press, American Planning Association. 1984.

_____. Excerpts from *Times Square Subway Station: Security and Public Use*. Prepared for the New York City Public Development Corporation. 1984.

Whyte, William. *City: Rediscovering the Centre*. New York: Doubleday. 1988.

Women Plan Toronto. "Evaluation of Underpasses According to METRAC's Women's Safety Audit Kit". Toronto, 1991.

Safer Workplaces

B.C. Federation of Labour and the Women's Research Centre. *Taking Action: a union guide to ending violence against women*. 1992.

Campanelli, Josephine. *The Fear of Sexual Assault: How Does it Affect Women Who Have to Work in the City at Night?*. Honours Thesis. 1987.

City of Toronto Parks and Recreation Department. *Facility Safety Audit Summary*. 1991.

Edmonton Police Department. "Working Alone: security in the workplace". n.d.

Hetherton, Mandy. "The other office hazard" in *WEB: Women & the Built Environment*. Issue 14, p. 3.

Swanton, Bruce. *Violence and Public Contact Workers*. National Committee on Violence, Violence Today Bulletin #5. Woden: Australian Institute of Criminology, 1989.